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HENRY C. PEARSON,
EDITOR.

HAWTHORNE HILL,
ASSOCIATE.

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ON FIXING CRUDE RUBBER PRICES.

THE American houses engaged in the crude rubber trade do not, as is the practice of several European firms, publish periodical comments on the conditions of the market. If they did, it is possible that the tendency of prices at times might be attributed to the action of importers or merchants on the other side of the Atlantic, just as the reports issued there so often attempt to fix the responsibility for fluctuations upon firms in New York. There is probably no other commercial problem so perplexing as that of determining the elements which actually fix the prices of crude rubber. Hence it is not strange if, in any rubber trading center, it should be assumed that the controlling influence exists in some other place; to find that other place is a perpetual puzzle.

The remoteness from commercial centers and the lack of civilized conditions in the regions whence crude rubber is obtained, the risks of life and of capital in procuring this material, the difficulties in the way of controlling the business in its primary stages—all these considerations render impossible such definite forecasts of the rubber "crop" as may be made of the yearly yield, for instance, of wheat or cotton, or the production of any staple of manufacture. When it is considered, further, that the yearly consumption of rubber is variable, it will be seen that, in a way, the crude rubber business is a distinctively speculative one. That is to say, the crude rubber merchant cannot figure certainly, very long in advance, what his purchases may be expected to cost him, because he can predict the extent of neither the supply nor the demand for rubber. Naturally, therefore, a higher rate of profit must be figured on, in every stage in the progress of rubber from the forest, than in lines of business that have become more systematized. A handsome gain on one transaction is liable at any time to be offset by a loss on the next.

Within a year there have not been lacking charges in European rubber trade circulars that New York houses have sold rubber at lower prices than the conditions of the trade warranted—with a suggestion of some ulterior motive. So long as contracts for the sale of rubber must be made often in advance of the arrival of the rubber in stock, there must be differences of opinion as to what prices should be named, and if an importer or merchant should make a wrong forecast, we fail to see wherein his act is reprehensible. We have known manufacturers to make just as marked mistakes in paying too much for rubber for future delivery, but nobody has seen fit to charge them with improper conduct. But so far as the charge of "bearing" prices by New York merchants is concerned, it may be pointed out that the downward tendency of rubber for the past twelvemonths has vindicated them.

As for manipulating the market, we venture to say that there is not a house in New York, Liverpool, or Pará that could, either alone, or with all the connections that it possesses, very long maintain a higher level of prices for rubber than the conditions of supply and demand warrant. Even if all the larger houses on either side of the

Atlantic were to combine in an attempt to keep prices at an inordinately high level—or, in other words, to make more than a reasonable profit—it would only make an opportunity for smaller dealers to put rubber on the market at prices which would simply yield a fair profit, in which event any "corner" would be of very short duration.

WHY THE "LITTLE FELLOW" FLOURISHES.

IT is often a matter for wonder that, in the shadow of some great industrial amalgamation, so many small companies spring up, prosper, and even grow to be giants themselves. As a matter of fact, the reason is patent, and not far to seek. The big companies are forced by the volume of their business to employ men who soon lose their individuality and become such small factors in the whole business that they stop thinking. Not one of them individually is responsible for the solution of vital problems—they go before a board of directors, who often are handicapped by political and financial facts, besides being burdened by an ever increasing amount of detail. The "little fellow," however, is "up against" necessity, the fruitful mother of invention, and his existence depends upon cheaper methods, shorter cuts, and revolutionary processes. He thinks night and day, and the chances are that the dwarf will outwit the giant in the long run. The great companies stand ready to pay the highest prices for brains, but genius works for itself better than for others. Hence it is a matter of history that the best thought and the most brilliant records are likely to come from the struggling outsiders. Anything that stimulates progress is to be respected, and not in the least should the so called "trusts" fail to receive their due meed of appreciation for the success they have won for others.

THE REVOLUTION IN RUBBER SHOE MAKING.

BY far the most interesting topic of conversation in the rubber trade for a month past has been the new process for the manufacture of rubber shoes. As becomes a dignified, rich, and respectable industry, the rubber shoe trade received the news with marked interest, but with little apparent excitement. That, however, did not prevent a very careful analysis of the statements made in *THE INDIA RUBBER WORLD*, and a searching inquiry into every detail of the new manufacture as far as it was known. As a matter of fact, for the last thirty days rubber shoe men the world over have had on their thinking caps, and so have many others, particularly in the mechanical line, for the latter were quick to see that any man with a sheet calender and a friction calender could easily equip himself to be a rubber shoe manufacturer. The editor of *THE INDIA RUBBER WORLD*, as the news-bearer of the trade, has, as a matter of course, heard every objection advanced that experience, ingenuity, and self protection could bring forward, but a careful review of the whole situation leads him again to go on record with the statement that the revolution is here. Further, the advances made during this month, in the production of goods more beautiful than

has ever before been deemed possible, leads him to affirm that the time is not far distant, in his judgment, when the present process of manufacture not only will cease, but will be forgotten.

FEDERAL CONTROL FOR TRUSTS.

THE United States Industrial Commission, created by an act of Congress, will have finished its work, and submitted its report by the middle of this month. The gist of their recommendations is said to be that Trusts shall be brought under Federal instead of state supervision. That is, that they shall be looked after, much as national banks are, and that their books shall be open to the inspection of certain Federal officers who shall have powers similar to the familiar bank examiners. The commissioners believe that by this means they can prevent over-capitalization, and the underselling to crush competition in one part of the country, while prices are advanced in other territory. The plan is to induce the corporations to become Federal instead of state corporations in much the same way that state banks were both coaxed and forced to become national banks. The proposal is said to be to put a tax either on the products or on the corporation itself which is capitalized above a certain figure. Such a plan would of course include a national corporation law and a department, say one of Commerce and Industries, to charter companies for interstate commerce.

A TYPICAL INSTANCE.

ALONG the New Jersey coast, at the great seashore resorts, there are miles of piers all built upon piles. Until recently these piles were driven into the sand by the old fashioned and familiar pile driver. To day, however a cheaper and quicker system prevails, and one incidentally that calls for India-rubber as an adjunct to its success. Instead of hammering the log down into the earth by main force, it is set in position, its lower end resting on the sand, and then a stream of water led through rubber hose plays into the sand at the foot of the pile. Instantly it is undermined and begins to sink and just as long as the stream flows just so long does the pile sink. The instance is typical. In like manner in the treatment of nearly every engineering or mechanical problem, has India-rubber come to the aid of the worker and in one way or another proved its marvellous adaptability—its immense ubiquitous usefulness.

COMPOUNDING RELIGION WITH RUBBER.

WE are again reminded of the Chiapas Rubber Plantation and Investment Co., of San Francisco, which has been mentioned more than once in *THE INDIA RUBBER WORLD*, by the receipt of a circular letter which seems to merit some comment. In October, 1900, under the heading "Is this Rubber Plantation a Myth?" we gave the substance of a lengthy article on the Chiapas enterprise from the San Francisco *Chronicle*, denouncing the methods of its manager, the "Rev." J. W. Ellsworth, who was reported to have been very successful in sell-

ing shares to church people. Although the *Chronicle's* statements were very definite, and of a character such as might invite a libel suit, they were dismissed by the persons most interested, in a letter to THE INDIA RUBBER WORLD, to the effect that—

Of course you understand that this is the attack of a bitter enemy, made with the intention of ruining Mr. Ellsworth and the company. The thing was so thoroughly overdone as to utterly lose its effect.

This letter appeared in full in an article published in our November, 1900, issue, under the heading "What is The Truth About Chiapas?"—a question not answered satisfactorily in the mass of printed circulars and statements sent to us at that time from the company's office. At a still later date—January, 1901—under the heading "Rubber Planting Companies to Avoid," the Chiapas concern was one of those referred to as having discredited themselves by the character of their advertising matter. Our article of that date said :

Thus far it would seem that the planting done by this company [the Chiapas] has been done only on paper, and that paper not such as will bear very close scrutiny.

Now comes a pamphlet from the "Chicago Chiapas Rubber Plantation Co., authorized selling agent for the San Luis division of the Chiapas Plantation," of which Chicago concern one A. J. Scott is "president and manager." Of course this pamphlet quotes our old friend Consul Guenther, in regard to the wonderful trees in Chiapas "which have been tapped for 35 years and are now producing 50 pounds of rubber annually to the tree." And, by the way, it is strange that the practical rubber planters in Mexico are all silent on the subject of Consul Guenther and his trees.

But it is not Mr. A. J. Scott's pamphlet, but the accompanying circular letter, that is most interesting. It begins with "a few personal words." In the second sentence he mentions having been pastor of a church near Chicago for seven years. Then he tells how he longed for "a secure place" in which to invest his small savings "where they would eventually pay large profits." It appears that he went to California and met the Rev. J. W. Ellsworth, and now he is seeking to emulate Ellsworth in Chicago.

I do not expect you to accept my statements simply because I am a minister in good standing [says the Rev. A. J. Scott], but that may be a sufficient reason for reading the little pamphlet which I send you.

In the pamphlet one may read, set in capital letters—

100 POUNDS OF RUBBER HAVE BEEN TAKEN FROM AN OLD TREE AT A SINGLE TAPPING.

—followed by this in smaller type :

The cost of transportation is an inconsiderable item. Here is an article worth \$1 a pound that we can ship from our plantation to New York or London for less than 1 cent per pound. We could sell rubber for 20 cents a pound and pay good dividends; we could ship our product by mail and pay large profits to shareholders.

But we must quote from the Rev. A. J. Scott's letter again :

Certainly no man who believes in the Gospel should think lightly of this thing because it seems TOO GOOD.

All of which suggests that, however religion may be regarded in its own proper place, the mixture of religion with rubber planting on paper makes a sorry combination in the eyes of people who really know anything about rubber.

AN AMERICAN PACIFIC CABLE, it now appears, will be ready for work, as far as Hawaii, as soon as an order already placed with the great Silvertown company can be executed. It was to be hoped that, by the time American capital and enterprise was ready for this new field, an American factory would be prepared to build an ocean cable. But there will be many miles

of such cables to be laid yet, and the field is as open to American skill and energy and capital as to the same elements of progress in any other country. It is a good thing, by the way, that the new Pacific cable is to be under private control. Doubtless it would be well managed by the government, but it is more in harmony with American sentiment and tradition for such enterprises to be left to private initiative and management.

THE TIME REQUIRED FOR RUBBER TREES to reach a productive age may appear long to those whose ideas of planting have been confined to the growth of crops each year, between spring and autumn. It is natural, therefore, that a tendency should exist to plant "short crops," which may mature and yield an income from the same ground, while rubber seedlings are maturing into productive trees. But what would the rubber planters who are impatient at waiting seven or eight years for a "crop" think of "going in" for the cultivation of timber, as is done in Perak, for instance? We mention this because a report received from the region mentioned states that the object of a certain plantation is to grow timber, and "Pará" rubber trees are interplanted with the young growth of other woods, "chiefly in order to obtain some return from the plantation during the first ten or fifteen years of its existence, and before the timber can be of any value." Think of Pará rubber for a "short crop!"

THE MOST INTERESTING FEATURE of the second annual automobile show under the auspices of the Automobile Club of America, held at Madison Square Garden, in New York, during the past month, from the standpoint of the rubber industry, was the marked predominance of the pneumatic tire in the equipment of the vehicles exhibited, and, further, the indication of a tendency in favor of detachable tires in preference to the single tubes. It appears settled that, so long as pneumatic tires are used, their liability to puncture will exist, and, no matter what may be true of the ease of repair of single tube bicycle tires, a more difficult proposition is encountered when repairs are necessary on the heavy type of tires required for automobiles. Hence the advantage of having a tire with an outer cover capable of being treated independently of the air tube. All the various types of tires were shown in Madison Square Garden, however, and all with their advocates, apart from the manufacturers and dealers interested. By the way, the exhibition was the most successful of its class yet held in America, indicating both progress in the evolution of practical automobile construction, and an increase in public interest in the new vehicles and public intelligence regarding them.

TESTS SHOWING THE ADULTERATION of crude rubber and the various ingredients used in the rubber manufacture are eagerly sought in every factory. In the larger plants, where a laboratory and testing department exist, it is of course comparatively easy to detect adulterations and impurities, but the smaller factories are often hard pressed to prove where the fault lies. On another page will be found an article on the adulteration of Pará rubber by the introduction of farina flour, in which is described a very simple method of detecting the presence of the adulterant—something that every superintendent may well remember.

FOLLOWING UPON THE DECLINE in the cost of crude rubber, shoe manufacturers have further cause for congratulation in the prospect that we shall have more snow than last winter. Large sales, even at small profits, mean good business.

A PICTORIAL PRESENTATION OF BUSINESS GROWTH.

THE three illustrations on this page give an excellent idea of modern rubber factory growth—in this case applied to the plants of the Tyer Rubber Co. at Andover, Massachusetts. It may interest some incidentally to know that the pioneer factory shown in the smallest cut was



that in which the Editor of THE INDIA RUBBER WORLD—then a callow youth of sixteen—took his novitiate in rubber manufacture under the guidance of that ideal gentleman, the late Henry George Tyer. It was in 1856 that Mr. Tyer laid the foundations of the business manufacturing under his own name and laid them well. One now remembers that he was one of the pioneer manufacturers of the then popular "compo" shoe. He was also the inventor of the "Congress arctic," furnishing millions of yards of a special goring to the rubber shoe companies of that day. As the inventor of white zinc rubber it was natural that he should manufacture druggists' sundries, which to-day form so important a part of general rubber manufacture. The second illustration shows the plant as it was when the Tyer Rubber Co. was formed. The officers of

that company were and are Horace H. Tyer, son of the founder, president; John H. Flint, treasurer. President Tyer is a practical rubber man in every sense of the word and keeps in personal touch with the whole business, while Treasurer Flint is accounted one of the best types of New England financiers. Under such guidance the business has grown enormously, as shown in the last illustration, which is not an ideal but a real view. The new factory is in every respect a modern up-to-date plant, equipped with the latest and best machinery and with all labor saving devices. It is of mill construction, the designer and builder being the well known rubber mill architect, Henry J. Preston, of Boston. The factory buildings are of brick, three stories in height in front and four and five stories in the rear, and contain 82,000 square feet of floor space. The power is furnished by a 400 horse power Slater engine, to which is attached a rope drive. The plant is electric lighted and equipped with sprinklers and the latest devices for fire protec-



tion. There are at present 400 hands employed, and the business is growing so rapidly that a larger force and additional buildings will doubtless soon be added. The company, by the way, is a member of the Rubber Manufacturers' Mutual Fire Insurance Co., of Boston.



TESTS OF STRENGTH AND EFFICIENCY OF FIRE HOSE.

DIFFERENT kinds of fire hose require different tests for results. The manufacturer who has knowledge of and reliance upon the materials he uses rarely tests his products, except in the case of cotton hose, when it is done to ascertain the condition of linings, and occasionally linen hose is tested by the maker. Knowing the strength of yarns employed in weaving or knitting fabrics, and having a knowledge of the strength per pick per inch, the manufacturer is aware of the strength in resisting water pressure he should attain. It is only occasionally, therefore, that even the most cautious makers test a piece of completed cotton hose up to bursting pressure to convince themselves of the strength of the hose lining.

When purchasers test fire hose they commonly make the error of subjecting the hose to the full hydraulic pressure for which it may have been guaranteed. As this is practically never less than 400 pounds per square inch these days, and occasionally 500 pounds with closed ends, and as any fire service (outside of the heaviest fire boats) rarely produces to exceed 200 pounds pressure on any line of hose, the disastrous effect to this hose can readily be seen. While the hose may be guaranteed at a minimum strength of 400 pounds, it is wholly unsupposable that, though it may be capable of holding that pressure once, when new, it could ever be as good hose afterward. Consequently such hose, after the extreme test, cannot live as long as hose subjected to a pressure a little in advance of the maximum commonly attained by the department buying. Yet the custom is almost universal—at least in those cases where fire departments test their purchases of hose at all.

The usual method for such tests is by the use of a hand hydraulic pump, or a steam fire engine. As the outer end of the line must be closed, either of these methods is necessarily very severe upon the hose, because of unavoidable "water hammer" produced by the forcing stroke of the pump piston. Under such conditions the writer has seen the pressure-gage hand jump backward and forward, showing approximately a variation of 50 to 70 pounds on the dial. At such times this pumping is often continued until the hand will jump from say 360 to 430 pounds, equal perhaps to a resistance of over 500 pounds steady pressure. Such procedure can only result most unsatisfactorily to both buyer and seller, for, should the hose thus treated survive the injustice, the department using it could never get as good service out of it, and the reputation of the makers would suffer.

In contradistinction to such crude resorts, the largest city fire department in New England had built and installed in 1896 a three plunger belt driven pump, exclusively for testing its fire hose. Those familiar with such mechanism can easily comprehend its value. The hose is fed by gravity pressure from a hydrant in the yard, and the feed water is forced by this splendid pump. The hand on the gage shows the advance of pressure to be as regular and smooth as the running of a chronometer. This pump is invaluable for testing also the strength of hose in service, thus saving much hose which to-day is condemned upon suspicion. The fire department referred to limits all pressure tests of hose in service to 190 pounds. Its test of 325 pounds for new hose—being the maximum—is reasonable and in no way depreciates the hose. But by uneven pumping each additional 5 pounds above that figure is very

trying to the life of the hose, because it results in excessive elongation and weakening by bursting thread or yarns.

Upon the initial test by the fire department buying hose, a great deal of vital importance to seller and buyer depends. It will be borne in mind that in the original test by buyers, the end of the line being tested must be closed, by a cap which is screwed on. In this cap is a pet cock to admit of the outforcing of all air, though sometimes also a hydrant gate valve or a shut off nozzle is used instead. When the hose receives sufficient water to fill out its circumference, the release at the outer end is opened, and held so until all air is excluded, then closed, when the pumping begins, and continues until the testers are satisfied. This is necessarily very much more severe upon hose than any situation of its use in ordinary fire service, from the fact that in fire service, when under pressure, water is either flowing through the outlet, or, when a shut off is used, the strain on the hose is checked by an automatic relief valve on the engine. All steam fire engines built nowadays are supplied with relief valves, and in many places where heavy gravity pressure is used and where engines are not employed at all, a similar relief valve is attached to the outlet of the hydrant. Incidentally it is well to note also that the average fire department will not accept hose whose couplings show any continued leaking after being tightly coupled—when under test pressure.

What is known universally as "fire pressure" is 125 pounds, though, as previously stated, it is a very rare occurrence when pressure in fire service exceeds 200 pounds. The writer has heard a veteran manufacturer of fire hose state that in his opinion a fair way for a fire department buying hose to test it would be to select at random from its purchase one piece from every 1000 feet and subject it to three times the maximum of its ordinary fire pressure. Certainly this would have the tendency to elevate the character of fire hose. The vital part of cotton hose to be considered is the lining. Nearly all makers can produce fabrics strong and durable enough, but damage from stowing in the fire wagon, liability to freezing, and the various other unusual strains make a high grade lining indispensable.

"Mill hose" is tested under somewhat different conditions. This hose is so known because of its almost universal use in mills, factories, hotels, office buildings, and other large buildings, and is made of cotton and linen. The largest quantity of this hose is bought because the conditions of insurance policies require it. The higher grades of it are known as "Underwriters." The first aggregation of Underwriters to get out specifications for the qualities of materials employed in manufacturing, and the results to be shown under test before the hose becomes acceptable by it, was The Associated Factory Mutual Insurance Companies, with headquarters in Boston. On the following page will be found these conditions, for both cotton and linen hose, abridged somewhat from the official publication. These tests are exacted by the above association, and the hose when bought is rarely tested by the purchaser, who relies upon the insurance people, whose risk the worth of the hose becomes, when examined, or perhaps tested, by the inspector.

In June, 1899, at the annual meeting then held of the National Fire Protection Association, specifications were adopted as "Standard for 2-5/8" cotton rubber-lined hose for private mill fire department." This association is composed of various boards, associations, exchanges, and bureaus of leading stock

companies in principal parts of the United States and Canada. As far as these specifications go, they are practically the same as those exacted by the Associated Factory Mutual Insurance Association, whose demands for linen hose are that it shall stand 400 pounds pressure, and that during the first five minutes of the second wetting it shall not leak to exceed 16-7/10 gallons per 100 feet; and during the second five minutes one gallon per 100 feet, while under 400 pounds pressure.

The specifications referred to on the preceding page are as follows:

COTTON RUBBER LINED HOSE.

I. Each piece of hose to have a distinct and conspicuous trade mark, consisting of colored warp threads woven into the fabric. Manufacturer's name and trade name of the hose and year of manufacture to be stenciled at least twice on each length of hose, in black indelible letters 1 inch high.

II. Cotton fabric may be woven or knit, even and firm in texture, of best quality selected long staple yarns, free from defects except such as are incident to the best manufacture. Filling threads must be covered thoroughly by the warp in woven hose, and in knit fabric both warp and filling must be covered by the knitted loop. Fabric to be guaranteed antiseptically treated, and not to mildew under proper treatment. Weight of 100 feet of 2 $\frac{1}{2}$ fabric not to be less than 33 nor more than 40 pounds.

III. Rubber lining to be of the best quality and contain not less than 40 per cent. of pure Pará rubber, and must not contain rubber substitutes, old vulcanized or reclaimed rubber, or any injurious adulterants, and must be uniform in thickness and quality. It must be thoroughly cemented to the fabric with the best cement. Tube to be lap jointed and made up of not less than 3 calendered sheets, in order that if defects occur in any ply they may be remedied by the other two; exclusive of cement, must not be less than .049 inch, and with cement, not less than .072 inch in thickness.

IV. Internal diameter not to be less than 2 $\frac{1}{2}$ inches.

V. Diameter through couplings to be 2 $\frac{1}{2}$ inches; couplings to be of the expansion ring pattern, with long tail part, made of an alloy of copper, tin, and zinc (and lead, if desired)—not less than 82 per cent. copper or 7 per cent. tin, and not more than 7 per cent. zinc or 3 per cent. lead; must weigh not less than 5 pounds and be stamped with manufacturer's name and year of manufacture.

VI. Weight of finished hose without couplings to be not less than 34 pounds, or with couplings 39 pounds, per 50 feet length.

VII. Samples 3 feet long, when lying straight or when curved to a radius of not more than 2 $\frac{1}{4}$ feet, must show average bursting pressure of 500 pounds, though individual samples withstanding 450 pounds may be accepted. Section 3 feet long, with the ends tied together and couplings touching, must show average bursting pressure of 300 pounds at sharp kink in the middle, though 250 pounds may be accepted in individual samples.

VIII. Elongation between 10 and 100 pounds should not exceed $\frac{1}{8}$ of the original length, and between 10 and 300 pounds, $\frac{1}{6}$ of the original length.

IX. Any undue amount of twist is looked upon as showing inferiority in weaving. Hose should show but little tendency to twist at 100 pounds, and up to 300 pounds the twist should not exceed 15 degrees per foot.

X. Increase of diameter, between $1\frac{1}{16}$ and $1\frac{1}{8}$ inches from 10 to 100 pounds is within reasonable limits.

UNLINED LINEN FIRE HOSE.

I. Each length to be marked with warped threads, as in the case of cotton rubber lined hose.

II. Name of manufacturer, etc., to be stenciled every 15 feet, in letters 1 $\frac{1}{4}$ inches high.

III. Each web of hose to be numbered serially as it comes from the loom, and its number to be stenciled on each 50 foot section. Each manufacturer to maintain an apparatus for testing hose, and to test a sample at least 3 feet long, taken from each web as it comes from the loom.

IV. The maker to guarantee: (1) That hose on delivery shall not burst at a water pressure less than 400 pounds per square inch; hose to be wet under pressure at from 10 to 20 minutes before bursting; hose to be tested the same as cotton rubber lined hose. (2) That after having been wet under a pump or hydrant pressure of 75 pounds and thoroughly dried, that then, on being subjected a second time to a water pressure of 75 pounds, the total leakage during the first minute shall not exceed $\frac{1}{2}$ gallon per foot in length, and that upon this second trial, after the hose has been wet for 5 minutes, the total leakage during the next 5 minutes shall not exceed .01 gallon per foot in length; the water pressure meanwhile being 75 pounds per square inch.

V. The maker to guarantee that the yarn from which the hose is woven has been procured from a responsible manufacturer, whose name is given under a written guaranty that it was spun from first quality linen, and that it has been cleansed by boiling in soda ash solution of a strength obtained by using a weight of soda equal to at least $\frac{1}{10}$ of the weight of the yarn, for at least 3 hours; then properly washed in clean water, and then boiled again, in a similar alkaline solution, for 2 hours more.

MANGABA OR MANGABEIRA RUBBER.

THE mangaba or mangabeira gum is a natural product which contains some of the qualities of elasticity of India-rubber, though looking quite different, on account of being a product which has not undergone the smoking process. Up till now it is prepared through the action of heat alone. The milk is heated in a clay vessel which is afterwards broken in order to take the stuff out. This gives a heavy loss. Perhaps, combining the action of the heat with that of a small amount of certain chemicals, it might be possible to get better results. Either on account of its appearance, or because it is little known, there is scarcely any demand for the mangaba. Yet it is cheap; it can be got in some places along the Tocantins and Araguaya rivers at something like 10 cents a pound. Therefore, even if it cannot answer all the purposes of Pará rubber, there might be reasons for investigating its use either alone or in combination with other matters. Though it is little known and little used, we think this product has some future.

On the Pará side of the Tocantins and Araguaya rivers, between the Itacayuna and the Tapirepe, there is in the *campos* (land covered with lower vegetation) a shrub, the "mangabeira," which gives a milk more or less similar to that of the Pará rubber tree, but which does not coagulate so easily and not at all through the smoking process. The mangabeira is never to be found in the forest; it is only in the *campos*, where the vegetation is not high. It is about 7 or 8 inches in diameter; the average height is 16 feet; it is not very resistant and perishes quickly when overworked. It gives quite enough milk, yet as the stuff has at present no great commercial value, this advantage disappears.

Along the Rio do Somno, which is one of the places of production, 33 pounds are sold at less than 20 milreis [=equal \$4.40, gold, with exchange at 11d. per milrei] and in the town of Pará itself the value is seldom double. As the milk is abundant, the production is equally so. A man gets easily 11 pounds per day, but as the price is low, this industry is not so advantageous for the working man. Something like 5 milreis per day is not very much in such a place where a man has to provide his own food. Yet in spite of that, in spite of the great distance to the nearest market towns, and in spite of the uncertainty of the sale, there are already some working people coming from the state of Maranhão and from Bahia. The total production is less than 22,000 pounds (in weight).

EUGENE ACKERMANN,
Engineer.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

THE rather more than storm in a teacup which lately occurred and has now subsided into quiescence at the works of the Leyland and Birmingham Rubber Co., invites a few words of comment which perhaps come all the better from one who is free from the bias which is at any rate to some degree inseparable from both master and man. The main object of the Union is the maintenance of an equitable fixed wage among workers of a certain class, and where this is carried into effect it will be conceded that any increased burden which may be imposed upon the manufacturer is equally borne by his competitors. It must be said that in the years during which the Union has been in existence very little friction has occurred between the officials and the masters, and what there has been has been amicably settled. Membership is by no means universal, there being plenty of abstentions, especially among those who do piece work, those connected with proofing being the chief adherents of the Union. The main fact which has of late caused the Union officials to develop increased activity is the knowledge that certain works situated in country districts have taken advantage of the labor which is continually forsaking the plow for the factory. Agricultural laborers weary of the monotonous conditions of their life, and of the low pay attaching thereto, offer themselves at the factory door at rates of pay considerably below what is usually paid to town workers for the same class of work. There are of course few of us free enough from the taint of buying in the cheapest market to enable us to throw stones at the manufacturer who avails himself of this labor, but although it certainly may seem to be interfering with the sacred rights of liberty so dear to Englishmen, it can hardly be contended that the rubber workers union are wrong in their attitude of protesting against the introduction of such an important lever in the reduction of wages; nor can it be agreeable to the trade as a whole to see that one or two manufacturers have such an advantage in the labor market. That the trade is somewhat at variance on the subject of the Union is clear from a notice exhibited in the lodge of a Manchester works, in which city the headquarters of the Union are situated, to the effect that all hands taken on must be members of the Union, the proprietor being evidently convinced that by this course of action he is furthering and not retarding his own interests. Space does not permit of further reference to this subject, though it contains many points which might be ventilated with advantage.

THE writer of a recent article in the *India Rubber Journal* advocates the abolition of the post of sub-manager in rubber works, and is in favor of there being no intermediate authority between the head manager and the various foremen.

THE SUB-MANAGER. From what I have gathered in conversation, this contention does not find very general acceptance, for various reasons, the gist of which may be given here. An important point has connection with the personal equation. Without wishing to disparage the British workman, he has, it must be confessed, in many cases too great an addiction to drink or to laziness, either of which attributes frequently leads him to absent himself on Monday mornings, and generally to be somewhat spasmodic in his attendance at work. It is from this class that foremen are selected, and unless the assistance of a sub-manager was available it would

cause the head manager to go in constant fear of ineffective supervision as to be ready at a moment's notice to take the post of foreman, which would obviously be a waste of money. The British foreman, as a rule, receives but little higher pay than the men under him, and such of these as are doing well at piecework, do not evince any great disposition to take up duties the responsibilities of which are not, as a rule, adequately remunerated. The foreman, moreover, is usually rather too remote in point of education from the manager, to enable them to discuss things together with that freedom from servility which is desirable; he is apt to be too much overawed when ushered into the carpeted office, and to confine himself to monosyllabic utterances, instead of enlarging effectively upon the points of discussion in the way that a man of superior attainments could, or should be able to do. Again, and this is really, it seems to me, the *crux* of the matter, the manager of a large factory, say one employing 500 to 1000 hands, cannot be placed in the same category as one presiding over a tenth of these figures. In the latter case supervision would be possible; in the former case, if it is to be at all adequate, it would be impossible. An important point referred to by one of my informants, was the technical status of the manager. Many of those who hold this responsible position, are certainly not experts in the manufacture, but are more noted for their general commercial abilities, and without the assistance of expert sub-managers, they would often find themselves in a fix. Whether this state of affairs is advisable in the best interests of the trade, is beside the present subject, but it seems important to indicate its existence.

FOLLOWING on their large contract with the Salford corporation for electric cables, this firm have just secured a similar contract in Manchester, the value being £130,000. The Diatrine insulation, the property of this firm, is evidently gaining increased confidence, now that the lapse of time has resulted in no charge of inefficiency being brought against it.

This extensive cable laying is having a rather curious effect on the pitch market, this commodity being now quite scarce owing to the increased demand. Considering the depressed state of the markets for other coal tar products, notably benzol and anthracene, the demand for pitch is appreciated by the distillers, but it does not pay to distill tar for pitch alone, and it rather looks as if the uniform procedure of the tar works will have to undergo an alteration. As regards the natural pitch, it is understood that this is largely under the control of the Callender Cable Co., who insulate with a pitch compound called Bittite, and also use pitch for laying the cables in.

ALTHOUGH there is a good deal of grumbling about the slackness of trade, it is notable that this ebullition of feeling is not universal, one works in fact stating that they have never had a better year. Of course there are many factors that go towards the making of a respectable dividend and in a trade which is, if anything, overdone, the fact that some works are kept at it overtime is almost conclusive proof that others are correspondingly slack. The explanation of the optimistic and pessimistic reports would seem then to lie in the success or otherwise of the several firms in attracting the trade that is to be done. Though here a reservation needs to be inserted,

because a works may be exceptionally busy and yet show but a bare profit, on account of the low price at which the orders were taken. Some classes of work are notoriously more profitable than others, and the dividend earned will depend upon the particular class of work or particular orders obtained more than upon the bulk of work done. Despite the buoyant tone of certain manufacturers there can be no doubt that business has fallen off generally this year compared with last year, but then the price of rubber, especially of medium qualities, has also fallen considerably, and even with a considerably reduced turn-over our works ought to be making money this year seeing that the policy of the manufacturers association has been against making any reductions in the selling prices. The advantage which the reduced price of rubber coupled with business aptitude has conferred on certain firms is apparent, and in this connection it may not be invidious to mention the names of The Irwell Rubber Co. and The Gorton Rubber Co., the satisfactory dividend of 7½ per cent. having been declared by the latter as the result of the second year's working, a considerable improvement on the last report.

AT this works, where Dr. Carl Otto Weber is located, a new laboratory has been fitted up. Replete with every convenience for analysis and research, it will probably be the **FRANKENBURG, LIMITED,** best of its kind to be found in a rubber works at the present time. I understand, by the way, that Dr. Weber will shortly publish a volume dealing with the chemical composition and analysis of India-rubber and its compounds, and this should prove an interesting and valuable contribution to the scanty literature of our trade. At present the information which the forthcoming volume will contain is scattered about in various journals and proceedings of societies and is therefore not at all easy of reference.

I NOTE that a firm now putting a new tire on the market guarantee it to contain 94 percent. of pure Pará rubber. Without wishing to comment on the mixing, I cannot help thinking what a commotion would arise in court if the *bona fides* of the firm happened to be impugned. I do not suggest for one moment that the goods are not turned out according to guarantee; I only recognize the great difficulty there would be in getting outside corroboration in the inefficient state of our chemical analysis with regard to the point. I may say that with some firms the term Pará sorts is used for Pará, thus bringing Negrohead into the fold.

FROM what I hear there does not seem much likelihood of the suggested action of the shareholders against the promoters of the company coming to maturity, and it is

PEGAMOID. probable that despite the reconstruction under a very much reduced capital the business will fizz out. There seems to be somewhat of an impression abroad that Messrs. Moseley could be proceeded against, but they were not the promoters, their connection with the concern being of a different nature, and what was done was by the deceased Mr. Joseph Moseley, whose liabilities, if any, in the matter have not passed to the present members of the firm. Of course the great mistakes about Pegamoid were the non-validity of the patent, the over-capitalization of the company, and the want of sound business acumen in the management. There is no doubt much truth in the saying attributed to Sir William Siemens that the most important part of a patent is the personality of those who are to work it, and it is more than probable that if Messrs. Moseley or some equally well-known house had worked Pegamoid themselves it would have been made a success. The lax state of our patent laws is exemplified in this case, where the patent was proved non-valid at the first trial, and there can be no doubt that the agitation which is going on in the country

on the subject presages an alteration in the law to the extent of an examination into novelty.

I DON'T know how much business is done in America in this line, but in English towns, where granite setts are largely used in street paving, the frog pad and, to a greater extent,

FROG PADS. certain forms of the pneumatic horseshoe, are gaining increased favor. The pneumatic form is said to be considerably better for the horse's foot from a hygienic point of view than is the solid pad. The latter are generally used by equestrians who have to use the streets, while the pneumatic shoe is generally adopted for carriage work.

A COUNTY analyst waxed eloquent the other day on the inferior character of American gas tubing. He got a quantity sent him, he said, from the States, and finds that it

RUBBER TUBING. is quite stiff and easily breakable. I told him that he had unfortunately got a low quality such as is also made in England and Germany, and which is very little use at all, if indeed not a source of actual danger from its liability to break. I cannot believe that no good quality tubing is made in the States, and I impressed upon him the importance of asking for the best on the occasion of his next order. In many varieties of rubber goods bad quality is no danger, but in the case of rubber tubing, which is often used in households for connecting stoves with gas brackets, tubing which is liable to break at a bend and allow gas to escape into the room, is most decidedly dangerous, and I know of at least one case where its use has been severely criticised officially.

MR. CLAMPETT, who, in the departure of Mr. H. H. Royle from Messrs. Macintosh's works two years ago, has filled the latter's place as head of the waterproof department,

PERSONAL MENTION. has now vacated that position. Mr. Clampett's service with Messrs. Macintosh dates back many years, and he has also been in the employ of Mr. Frankenburg. —Mr. Openshaw, formerly of Messrs. Macintosh, and afterwards with Messrs. Byrne, at Birmingham, now holds a position at the Hyde Imperial Rubber Co.'s works. —Mr. Rumbold has given up his post at the works of the Gorton Rubber Co. —Mr. Lister Smith, for many years representative of Messrs. Macintosh & Co., both in Manchester and Birmingham, has relinquished that post.

SOME WANTS OF THE RUBBER TRADE.

[204] FROM Scotland: "We would be very much obliged if you could let us have the names of makers of rubber sole rounding machines."

[205] From San Francisco: "Would you oblige me by sending the price list of several constructors of rollers for cleaning India-rubber?"

[206] From Baltimore: "I am desirous of obtaining full information on the subject of the most improved belt stretching machinery."

[207] "Who makes spreader knives, for proofing work?"

[208] We have an inquiry for addresses of parties likely to take an interest in starting a rubber shoe factory in Belgium.

[209] From a rubber factory we have a letter asking where the rubber solvent called "Vulcoleine" can be obtained.

[210] "Will you tell me the methods for coloring raw rubber compounds, in black, brown, and red?"

[211] From Pará, Brazil, we have received a request for the addresses of parties prepared to furnish outfits for making rubber stamps.

[212] A request comes for "Brazilian gum," for tire repairs.

OUR RECORD OF RUBBER PLANTING.

"PARA RUBBER" IN THE STRAITS SETTLEMENTS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: A few weeks ago I posted you a copy of the annual report of the botanic gardens in this colony, containing, among other rubber notes, the result obtained by tapping a single Pará rubber tree (*Hevea Brasiliensis*) growing in the Waterfall botanic garden, Penang. The result of four tappings within two years, as shown in that report, is 12½ pounds of dry, marketable rubber. Within the past month the same tree has been again tapped, and yielded over 2 pounds more, so that this one tree has given 14½ pounds, without being excessively tapped. How long it will continue to yield at this rate is a matter of conjecture, but so far as can at present be seen there has been no apparent injury to the tree. I am sending you by post a sample of the rubber and shall esteem it a favor if you will kindly submit it to some expert engaged in the manufacture of rubber goods for an opinion as to its quality and value.

In a few years' time this will be a large article of export from this region, and also what is known here as "gutta rambong" (*Ficus elastica*). Many large plantations here and in the adjoining Federated Malay States were commenced about four years ago, and tapping on a large scale is anticipated by the time the trees are eight years old. New plantations are being formed as fast as seeds are obtainable, but the supply is not equal to the demand. The tree from which the rubber I am sending you was taken is sixteen years old, but in good soil, such as most of the planters are using, the trees will be quite as large in eight or ten years. Ours is growing on a dry gravelly bank, conditions quite the opposite of those under which it naturally grows, so far as one can judge from the reports of those who have seen it growing in Brazil. Here it will grow anywhere, though of course not equally well in all places, and there is no doubt that in the future this country will have to be reckoned with as regards rubber. As a field for investment in this particular cultivation it would be hard to beat. Land is abundant and cheap and roads, railways and rivers afford easy access to all parts of the Malay peninsula. C. CURTIS, F. L. S.

Superintendent of Forests Section Botanic Gardens.

Penang, Straits Settlements, September 24, 1901.

COMMENT BY THE EDITOR.

THE tree from which was obtained the sample of rubber referred to above was stated, in the annual report of the botanic gardens for 1900, to be 55 feet high, with a circumference, at 3 feet from the ground, of 66 inches. The record of yield of this tree, as stated in the annual reports, is as follows, the tree having been tapped for 14 alternate days in each of the seasons mentioned:

	Lbs.	Oz.
November-December, 1898.	3	0
April-May, 1899.	2	8
November-December, 1899.	3	4
October-November, 1900.	3	12
August-September, 1901.	2	0
	—	—
Total.	14	8

From the same reports it is to be inferred that the rubber produced has been smoked with cocoanut husks after first having been allowed to coagulate and then rolled into thin sheets. Where the rubber milk has happened to contain rainwater, alum or spirits of wine has been used to hasten coagulation. The method of coagulating rubber on the Amazon is by submitting the fresh latex to the hot smoke of palm nuts, quite a

different method from that employed by our Penang correspondent.

The Penang rubber has been examined quite carefully, and is worth about 60 cents a pound, with fine Pará at 80 cents a pound. In fact it does not resemble fine Pará very strongly, but is much more like Pernambuco. The rubber is much softer than fine Pará, or even than coarse Pará, and has nowhere near as strong fiber. In fact, it is quite short. It could not be used, for example, in thread, elastic bands, or any fine pure gum goods. In solution it loses its tenacity very quickly, so that it would not do for high grade cements. Another thing about it is that it softens with age, whereas the Pará rubbers grow hard and oxidize. We think the reasons for these differences are two: one being found in the manner of coagulation, which does not seem equal to the smoking process; and the other being due to the undoubted change wrought upon the tree by a different climate from that in which the tree naturally flourishes. It is to be understood, of course, that the rubber is valuable, and will find a ready market at a good price, but it is not the equal of either fine or coarse Pará. We think this is another proof that rubber will be cultivated most successfully in the regions where it grows wild.

KAMERUN (GERMAN WEST AFRICA).

THE Moliwe Pflanzungs-Gesellschaft, of Hamburg, Germany, at the end of their second business year (July 1, 1900-June 30, 1901), reported that 42 acres of their estate at Moliwe in this colony had been planted in rubber, 32½ acres being devoted to *Kickxia elastica*, the tree which yields the Lagos rubber. The number of trees was 3960, which gave 300 to the hectare, or 121 to the acre. Dr. Paul Preuss, director of the botanical gardens at Victoria (Kamerun), writing to the editor of *Der Tropenpflanzer*, makes an unfavorable report on the growth of these plants, while the *Castilloa elastica* has done well. The late Herr Stammmer, head planter of the Moliwe company, reported favorably on the *Castilloa elastica*, and the company, on the advice of Dr. Otto Warburg, of Berlin, and with the aid of Herr Th. F. Koschny, of San Carlos, Costa Rica, obtained from the latter country this year 400,000 seeds of the *Castilloa*. Although the larger part of these seeds, by reason of the long voyage, were found to be spoiled on reaching Hamburg, it was hoped that at least 100,000 *Castilloa* plants could be grown for Kamerun from the lot. The Moliwe company are experimenting with various other rubber species.—Of the rubber under cultivation in the gardens at Victoria, Director Preuss reports that the seedlings of *Kickxia elastica*, from seeds planted in November, 1898, had, in two years and a half, reached a height of 3 meters, and were flowering. Besides, the bark was found to contain latex. The *Ficus Vogelii*, another African tree under cultivation, yields rubber liberally and of good quality. *Sapum utile* and *Hevea Brasiliensis* (Pará rubber) are each represented in the gardens by a few good specimens, the young trees of the latter species having begun to bear seeds.

MEXICAN MUTUAL PLANTERS' CO. (CHICAGO.)

JAMES MAUNDER, in charge of this company's plantation at La Junta, in Vera Cruz, writes to *Modern Mexico* that 330,000 rubber plants have been set out there this year, in holes 20 inches deep, made with posthole diggers. One man could plant 350 trees. A neighbor has been planting in holes made with a stake, and Mr. Mauder is waiting with interest for the

results, since the saving by this method would be enormous. Four nurseries have been made this year, and nearly three tons of rubber seed planted. Four kinds of nurseries were made. One of 15 acres, on the top of a hill, was cleared and the fallen timber burned; all creepers were cleared off and burned; a stump puller was used to remove all the stumps that could be raised without digging around the roots; the stumps were burned, and then the ground was leveled and rows about an inch deep opened with rakes, in which the seeds were placed about one inch apart. Fully 90 per cent. germinated. For the second nursery, of 5 acres, the timber was burned off, but the other work of clearing mentioned above was omitted, though the method of planting the seeds was the same. The appearance of the nursery is less neat, but the expense has been only one-third as much per acre. The plants, however, look just as well. Ground for the third nursery was prepared by deep plowing and spading, raking off the roots, and pulverizing the soil. It was then laid out in beds, leaving walks between to permit weeding and watering the young plants without walking over them. Rows 12 inches apart and an inch deep were opened with a rake, and the seeds planted as above. The ground being dug more deeply in this case, it is expected that the tap roots will be longer, and the result will be compared of setting out nursery plants with tap roots of different lengths. No details are given in regard to nursery No. 4. The planting of 330,000 rubber seedlings occupied 28 days. Mr. Mauder is an experienced tropical planter, having had charge of a coffee estate in Ceylon.

THE TEHUANTEPEC RUBBER CULTURE CO.

[Plantation "Rubio," Coatzacoalcos, state of Vera Cruz, Mexico. Offices: No. 35 Nassau Street, New York.]

THE company's second quarterly report to investors, dated November 15, 1901, is devoted to the continued success in the sale of the company's bonds, which is now almost concluded. Meanwhile the work of clearing and planting has gone forward at a satisfactory rate. The circular says: "Our next report will dwell chiefly on progress at the plantation, covering full details of the work there, and will be issued from Plantacion Rubio by Mr. Bennett [the president] personally." The report is accompanied by a copy of a letter from Alfred N. Litch, secretary of the Leominster Worsted Co. (Leominster, Mass.) who, in connection with the president of that company, has \$10,000 invested in the Tehuantepec enterprise. Mr. Litch spent the month of August on the isthmus of Tehuantepec, and writes encouragingly of what he observed there with regard to rubber planting and kindred interests.

UBERO PLANTATION CO. OF BOSTON.

[Plantation near Ubero, state of Oaxaca, Mexico. Offices: No. 89 State street, Boston, Massachusetts.]

AT a meeting of the directors on October 29, it was voted that a dividend of 10 per cent. be declared, payable as follows: 6 per cent. on December 31, 1901, and 4 per cent. on April 30, 1902. In computing dividends, all instalments on regular monthly payments paid previous to the 15th of each month, to be considered as having been paid on the first of the month. —The directors are: Arthur W. Stedman, Frederick C. Hood, E. H. Nebeker, Thomas Moran, William D. Owen, W. I. Overstreet, Victor E. Seiter.

MEXICAN GULF AGRICULTURAL CO. (KANSAS CITY.)

WHILE this company was formed for the purpose of planting coffee and has devoted its energies mainly to this industry, it deserves a place in any record of rubber planting in Mexico for the reason that its experiments with rubber have been the means of largely attracting attention to the cultivation of the

latter. The success of the Mexican Gulf company is indicated to some extent by the fact that a gold medal was awarded at the Pan American Exposition for the coffee grown on its "Dos Rios" plantation.

OAXACA COFFEE CULTURE CO. (ST. LOUIS.)

THIS company's "San Luis" plantation, on the isthmus of Tehuantepec, is reported to have under cultivation 450,000 coffee and 200,000 India-rubber trees, beside various fruits. The coffee trees are three years old, and some of them have yielded a crop this season.

CHIAPAS RUBBER PLANTATION AND INVESTMENT CO.

MR. L. H. BONESTELL, of San Francisco, California, and president of this company, was a recent visitor to the offices of THE INDIA RUBBER WORLD. He reported that the managing director of the company, the Rev. J. W. Ellsworth, continued to send favorable progress reports from the plantation in Mexico. Mr. Bonestell thought that about 8000 acres had been cleared for rubber—only enough for the forest growth being removed to make room for the rubber. About 3000 acres had been planted in rubber, and planting was in constant progress, so that it was expected that the remaining 5000 acres would be planted by the end of this year. These figures would indicate a marked degree of activity on the part of the Rev. J. W. Ellsworth since the appearance of the last previous reports.

INDIA-RUBBER IN CUBA.

FREDRICO M. CASTRO writes from Havana to THE INDIA RUBBER WORLD that some rubber trees are still standing which were planted about 1830 by Ramón de la Sagra in the botanical gardens which stood where the railway station at Villanueva is now situated. José Antonio del Castillo, a grandson of Sagra, has on his plantation "El Algibe" rubber trees planted by his grandfather. Señor Castro asserts that these trees, and also others within his knowledge on Cuban plantations, are the *Castilloa elastica*, with which species he became familiar while manager on "El Brinco" estate of Ramos Brothers, in Chicoalque, canton of Paplanta, state of Vera Cruz, Mexico. Some of these trees in Cuba, Señor Castro writes, are of a size and vigor he has never seen equalled "in the hot zones of Mexico." In October last he sent samples of rubber from planted trees growing in Cuba to Flint, Eddy and American Trading Co. (New York), from whom he received a favorable report as to quality. Señor Castro strongly advises the planting of rubber in Cuba, as a certain source of profit, and has contributed his views on this subject to the *Revista de Agricultura*, of Havana. He states, by the way, that many young seedlings of *Castilloa elastica* can be obtained from the vicinity of the large trees above referred to. His address is Apodaca 5 (altos), Havana.

RUBBER PLANTING IN BURMA.

THE first private enterprise in rubber planting in Burma was commenced in 1899 by W. S. Todd, of Amherst, who has now 60 acres under cultivation, chiefly of *Hevea Brasiliensis*, but has also some *Castilloa elastica*, *Manihot Glaziovii*, and *Funtumia elastica*. His conclusions, communicated to THE INDIA RUBBER WORLD, are that the growth of the *Hevea* is equal to the Ceylon records, but not so good as the Straits Settlements.

RUBBER PLANTING COMPANY PUBLICATIONS.

TABASCO Plantation Co., Minneapolis, Minnesota—(1) San Miguel Plantation Views, Bulletin No. 1. 3 pp. (2) A Fortune in Rubber. 40 pp. + map.

Mexican Mutual Planters' Co., Chicago.—*The La Junta Planter*, Nos. 5, 6. (February and April, 1901.) 28 pp. each.

THE AMERICAN PACIFIC CABLE.

AN order has been placed with the India Rubber, Gutta Percha, and Telegraph Works Co., Limited, of Silvertown, England, for the first section of the trans-Pacific cable to be laid and maintained by the Commercial Pacific Cable Co., of New York, the incorporation of which was reported in THE INDIA RUBBER WORLD of October 1 [page 24]. This section will reach from San Francisco to some central point in the Hawaiian islands, probably at Honolulu—a distance of about 2200 miles—and it is expected to be completed and ready for the transmission of messages about January 1, 1903. The cost of this section, it is understood, will be about \$3,000,000. The award was made after a comparison of tenders from the three leading English cable construction companies.

It was announced in New York on November 19 that the Silvertown company would begin work on the new cable within a week, with the idea of finishing it by July 1 next. The cable will then be loaded on board ship, and it will be three months more before it reaches San Francisco, the starting point of its journey across the Pacific. The actual work of laying the cable will consume about seventeen days, and with additional time for establishing the stations and allowing for possible mishaps, it will be ready for service in two months after its arrival.

George G. Ward, first vice president of the Commercial Cable Co., and one of the incorporators of the new company, when asked why the contract for the Pacific cable had not been awarded to an American manufacturer, replied as follows, according to the New York *Herald*:

"The Commercial Pacific Cable Co. would have been very happy to have given an American company its contracts, but there is no company in the United States that could, we felt, perform the work. They have not the machinery, and we could not afford to have the work of laying the cable take the form of an experiment. The Silvertown company has been established for over forty years, and has laid most of the deep ocean cables throughout the world, so that it understands perfectly just how the work should be accomplished."

"The company has assured us that they will complete the cable and have it here in seven months. Just as soon as this section is complete and out of the way, we shall commence work on another section that will connect the Hawaiian islands with the Philippines. Our station there will probably be on the island of Luzon and near or in Manila. We have not decided on that point yet, nor have we fixed our schedule of rates, but I may say, in speaking of rates, that we shall reduce them to a reasonable figure. We expect to have the work completed in about two or three years. The estimated cost of the undertaking is about \$15,000,000, but we have capitalized our company at only \$3,000,000, because we prefer to increase our capitalization as we proceed rather than use such a large figure at the beginning."

Mr. Ward said it was expected that the new cable would allow of the transmission of messages in nearly four hours' less time than required at present. He commended Mr. Mackay's enterprise in assuming the responsibility, and said he believed he was deserving of much credit. Reference is made here to John W. Mackay, president both of the Commercial Cable Co. and of the new Commercial Pacific Cable Co.

The Commercial Pacific Cable Co. was incorporated under the laws of New York on September 3, last with \$100,000 capital. On November 7 a certificate was filed with the secretary of state that the capital stock would be increased to \$3,000,000.

The question has been discussed at Washington, whether a

private company would have the right to land a cable at points on American territory without the consent of the government. The United States attorney general, Mr. Knox, is reported to have advised President Roosevelt that no reason exists for obtaining the consent of the government as to other points, but there is an unsettled question in regard to the claim of an English cable company, under an old Spanish grant, to have exclusive rights for cable landings in the Philippines. Meanwhile opposition to the new company has developed, prompted in part probably by the rival interests of the Western Union Telegraph Co. There is a movement to induce the government to construct a Pacific cable, to the exclusion of any private company.

President Roosevelt has not as yet expressed any opinions in regard to the cable matter. It is reported that Representative Sherman, of New York state, will offer a bill at Congress at this session authorizing the postmaster general to contract with a corporation or with individuals for the construction of a Pacific cable, but he is committed to no particular undertaking, but he prefers that the government shall not build and control a cable.

The Chamber of Commerce of New York, on November 6, adopted a resolution reciting the necessity for the establishment of an American trans-Pacific cable laid and maintained by private enterprise, and the fact that application to lay such a cable had been made by a responsible American company.

THE Chamber of Commerce of Manila, on November 15, cabled to President Roosevelt urging that the Pacific cable be laid and saying that one result would be an immense increase of the rubber industry of the Philippines, estimated at \$15,000,000, and also economy and the facilitation of business.

IMPORTS OF RUBBER SCRAP.

THE figures which follow, showing the quantity and invoice value of imports of rubber scrap at New York for the last twelve months, and also for the corresponding period, November, 1899, to October, 1900, have been obtained from the customs officials. The second column under each year, showing the average import value per pound, is based upon the custom house figures:

MONTHS.	1899-1900.		1900-1901.	
	Pounds.	Av. Value.	Pounds.	Av. Value.
November.....	1,077,613	6.12 cts.	818,124	6.10 cts.
December.....	1,111,080	7.97 "	1,111,949	7.52 "
January.....	1,404,689	7.03 "	880,902	7.13 "
February.....	986,649	7.78 "	341,361	7.01 "
March.....	1,331,205	5.41 "	764,322	5.88 "
April.....	878,478	6.90 "	279,755	8.41 "
May.....	918,536	5.90 "	717,469	6.48 "
June.....	1,240,305	6.14 "	904,835	5.45 "
July.....	991,279	6.20 "	2,049,166	6.31 "
August.....	1,392,546	6.25 "	1,846,283	7.02 "
September.....	1,626,512	6.70 "	949,757	6.75 "
October.....	1,469,928	6.18 "	1,303,732	5.43 "
Total, 12 months	14,428,820	6.57 cts.	11,967,656	6.46 cts.

While the imports were lighter, during the earlier months of the current year than in the same period of 1900, it will be seen that the figures for the last six months exceed any previous record.

NEW INSULATING MATERIAL.—The United States consul at Leipsic reports that a recently patented insulating material is made by taking pulverized casein and mixing it with vegetable oils. The mixture, to which India-rubber, resin, or coloring matter may be added, is pressed into forms and dried, or vulcanized by the addition of sulphur.

ADULTERATION OF FINE PARA RUBBER.

[FROM THE "GUMMI-ZEITUNG," DRESDEN.]

A DULTERATION of rubber has always been practiced, especially of the African sorts, and in isolated instances also of those coming from Pará, but these were generally an exception. But it seems that the adulteration of Pará rubber during the past season has assumed such proportions that it is to the utmost interest of the importers, as well as the manufacturers, to call public attention to this fact, in order to make future adulterations impossible. It is self-evident that these adulterations are perpetrated at the place of production—*i. e.*, along the Amazon and its tributaries—and the importers can exert their influence only so far as to call the attention of their correspondents to this evil and urge them to a sharp inspection before accepting the goods. No doubt this is the rule with most firms. But there are some firms who consider adulterations up to 10 per cent. as nothing unusual, and take it for granted that the product just now is of no better quality, and that the manufacturers have to take it as it comes. The experience which one of our largest factories had with importers, and which is given below, will show the true condition of affairs.

The adulterations consist in some instances in the mixing of medium with fine Pará, and in others in the admixture of farina flour, and this last named one particularly causes the manufacturers the greatest trouble. It seems peculiar that these adulterations occur almost exclusively in the so called soft or brown cure (Islands) rubber, and therefore in the rubber district of the lower Amazon, embracing the islands in that river near the city of Pará, while the so called hard fine cure (Upriver), coming from the upper part of the Amazon and its tributaries, is free from this adulteration. It seems that the rubber gatherers living remote from the large rubber center, Pará, are as yet not sufficiently cultivated to practice the mixing of farina, needed by them for food, with rubber milk and turning it into Caoutchouc.

The firm already mentioned had sufficient proof of a 10 per cent. adulteration with this flour, and so informed the house from which the rubber was obtained and placed it at their disposal. But, strange to say, this firm, an English house, demanded that the rubber be returned to Liverpool for inspection. It is the custom for sales of Pará rubber to be made on the condition "f. o. b. Liverpool," but to expect that a quantity of rubber, which has been declared as adulterated by experts, should be returned to Liverpool for inspection, seems to be rather strong. The factory refused, and the matter was arranged amicably. How much dependence can be placed on such an inspection in Liverpool is shown by what follows:

This same factory bought a parcel of 10 tons soft brown cure, the selling firm promising to have this lot undergo specially careful inspection and selection. The goods were accompanied by the certificate of a Liverpool broker, which read as follows:

We hereby certify that . . . cases soft cure Fine Pará rubber, shipped by Messrs. per to Hamburg, were duly weighed and tared in the presence of our man., and carefully inspected by him, and are of fair usual quality.

According to this certificate the Liverpool broker had sent a workman to "carefully" inspect the goods. How carefully this inspection had been made is shown by the fact that, on an inspection being made in the factory, exactly 10 per cent. of flour-adulterated rubber was found. The man had only looked at the goods superficially and had not even deemed it worth the trouble to cut the pieces in one of the cases; otherwise the adulteration could not have escaped him.

These adulterations with flour are at times so great that, on cutting through the pieces, the flour can be seen and often falls out. Such pieces, owing to their high specific gravity—given it by the flour—sink in water, and even if they float it is not positive proof of their purity, much ingenuity to disguise the adulterations being resorted to. Sometimes only the inner layers contain flour, while the outer ones, to the thickness of from 5 to 10 millimeters, consist of fine Pará. The worst feature of this flour adulteration is that washing does not remove it, and it remains in the washed rubber. A simple and absolutely sure reaction on flour is the reaction of a solution of iodine, which immediately gives a deep blue color to bodies containing starch. If a solution of iodine is applied with a brush to a piece of rubber containing flour, the portion containing it will immediately turn blue, while the others will retain their usual light color. Washed rubber, containing flour, will, on being tested with iodine solution, turn a deep blue; this proves that the washing process does not remove all the flour.

As mentioned above, the importers are not to blame for this adulteration. Their fault lies in the fact that the houses across the sea which are represented by them do not exercise sufficient care, and it seems strange that some firms pronounce such rubber adulterated with flour "fair average quality." Happily, these houses are the exception. Another large English house, to which the firm had sent samples and asked for advice, wrote as follows:

It happens off and on that a single piece of *entre fine* (medium), or one that has been adulterated with farina flour, escapes detection, but we must admit that an admixture of such pieces, and of the percentage you mention, has never been experienced by us in *bona fide* imports. We are well acquainted with the quality in question, receiving it regularly from Pará and from Manáos, where our houses separate it, and here of course it is sold at its value, according to the amount of adulteration. The standpoint assumed by your purveyor seems, in our opinion, to be wrong in every respect; with us no question would arise in the market, as to whether a parcel, adulterated to any great extent, with such rubber, was within the scope of contract, and the buyer certainly has the privilege to refuse such goods. The action of the broker who furnished your purveyor with the certificate is beyond our comprehension. If the parcel shipped to you consisted of "original import," the shippers on the Amazon must have been extraordinarily careless. Of course it is outside of our province to say whether the rubber reached you in the same condition in which it was received here, or if something "queer" happened to it in Liverpool.

It would certainly be of interest to know if such adulterations are experienced by others, and we beg those manufacturers who have met with like conditions to express themselves on this subject.

THE OFFICE OF "LATEX."

H. W. BENNETT, president of the Tehuantepec Rubber Culture Co., who has spent many years in Mexico and is familiar with its products, brings forward an interesting theory regarding the office of the *latex* in tropical trees and vines. It is of course well understood that the *latex* or milk from which rubber is produced is in no sense a sap. As far as is known, it does not feed the tree in any way, and its presence or absence has nothing whatever to do with the nurture or growth of it. Mr. Bennett's theory is that, tropical vegetation is so exposed to the attacks of myriads of insects that nature has given to it the protection of the *latex*, which appears to be unpalatable to such insect devourers. The theory is a plausible one, as almost every sort of tropical tree, particularly those having quick growth and soft wood, have some such milk, entirely distinct from the sap.

THE NEW ENGLAND RUBBER CLUB'S TROPICAL SYMPOSIUM.

ON Thursday evening, November 21, the Exchange Club, in Boston, from coat room to banquet hall, was taken possession of by the New England Rubber Club and its guests, the occasion being the regular Fall dinner, this time a "Tropical Symposium." The banqueters began to gather at 6 o'clock for an informal social held in the commodious smoking room, and lasting for about half an hour. Governor Bourn, president of the Club, then called the assembly to order, and held a brief special meeting to consider an amendment of the constitution. This amendment, which was adopted by unanimous vote, creates an associate membership with no initiation fees, but with annual dues of \$5, this membership consisting of those whose business or professional interests connect them with the rubber trade, also rubber manufacturers residing outside of New England. No other business being before the meeting, all present made their way to the dining hall, which was most beautifully decorated with tropical plants and flowers, the tables being arranged in the form of a great horseshoe, opposite the open end of which, in an alcove screened by tropical foliage, a band furnished music during the evening. The dinner was altogether the best that the club has enjoyed.

MENU.

Celery.	Cotuit Oysters.	
	Hors d'Œuvres.	
	Olives.	Salted Almonds.
	Soups.	
	Potage, Monte Cristo.	
		Consommé Perle.
	Fish.	
Cucumbers.	Cutlets of Smelts, Joinville.	Potatoes.
	Relevé.	
	Saddle of Lamb, à la Conde.	
Cauliflower, au gratin.		Anna Potatoes.
	Entrée.	
	Sweetbreads, en caisse, Matilde.	
	Punch—à la Favorite.	
	Game.	
	Roasted Quail, au cresson.	
Salad.		Pomme Paille.
	Dessert.	
	Fromage Glace, aux Fruits.	
	Cakes.	
Fruit.	Cheese.	Coffee.

After the coffee and cigars, President Bourn called the feasters to order, and then made way for the Editor of THE INDIA RUBBER WORLD who, in a brief speech, presented a beautiful hard rubber gavel, made of a blend of different kinds of rubber—Pará, Central, Congo, Assam, Madagascar, Java, and Borneo—all of these names being graven on the gavel. At the suggestion of the speaker, a former substitute for the gavel, a policeman's club made of rubber, was presented to the chairman of the committee on Rubber Stealing. President Bourn accepted the gift in the name of the Club.

The president then called the attention of the members to a letter from Mrs. Charles L. Johnson, acknowledging the receipt of the resolutions of condolence which the Club had sent on learning of the death of her husband.

Governor Bourn next, in a very happy vein, reviewed briefly the work that Prof. George Lincoln Goodale had done in connection with Harvard University Museum, and introduced him as the first speaker of the evening. Prof. Goodale talked inter-

estingly on lactiferous plants and trees of the tropics, his remarks being listened to with the strictest attention, and his excellent delivery and wonderfully easy manner impressing him upon all as a delightful speaker and one thoroughly at home with his subject.

The toastmaster then introduced Prof. O. F. Cook, of the bureau of plant industry, United States Department of Agriculture. As the Club had already been advised, the Hon. James Wilson, the head of the department, was unable to be there, but had sent Prof. Cook as his direct representative, and the president of the Club thus introduced him. Prof. Cook reviewed briefly our new tropical possessions from the department standpoint. He then, by request, spoke briefly of rubber planting, particularly with regard to Porto Rico and the Philippines. He was not altogether in favor of its introduction into Porto Rico, for the reason that the land seemed to be needed for agricultural purposes, upon which the large population there depended. In the Philippines, he said that so far the department had hardly had time or money to go as far as they desired in solving this problem.

The next speaker, Mr. Wilfred A. Joubert, was introduced as the one man who had been further into the jungles of Surinam in charge of Balata gatherers than any other living white man. Mr. Joubert briefly reviewed the condition of the country and told how Balata was gathered, and then in a humorous manner sketched the many difficulties that were met by one who penetrated these tropical wilds. In the course of his remarks he told several snake stories which were so thrilling and deliciously funny that they were greeted by bursts of applause and demands for more.

The next name on the program was that of Hon. William D. Owen, ex-secretary of state of Indiana, and ex congressman from that state, who was to speak on American tropical planting in Mexico. Mr. Owen, however, being absent, Mr. Bourn called upon Arthur D. Little, a well known chemist of Boston, who has spent much time upon the chemistry of India-rubber, for a brief impromptu address. Mr. Little spoke most interestingly on the difference between colloids, to which India-rubber belongs, as against crystalloids, to which substances like salt belong.

During the dinner, the toastmaster had discovered the presence of Mr. T. E. Stutson, who was there as the guest of Treasurer Whitmore. Mr. Stutson at a former dinner made a brilliant record as a teller of stories. The toastmaster therefore suggested that the gentlemen present would be very glad to hear from him and he at once responded in his best vein. The anecdotes that he related were certainly equal to after dinner stories by Dr. Depew, Mr. Choate, or Mark Twain, and the audience greeted them with gusts of laughter. Indeed they were so delighted with Mr. Stutson's stories that when he seated himself they demanded more, whereupon he gave them another round equal to the first.

The toastmaster then made a formal presentation of the rubber policeman's club to Mr. F. C. Hood, chairman of the committee on Rubber Stealing, and the gathering dispersed.

NOTES OF THE DINNER.

THE members of the New England Rubber Club certainly owe a debt of gratitude to Prof. Goodale, who, although suffering from a severe cold and against the advice of his physician, refused to disappoint them by being absent.

=The beautiful hard rubber gavel which the secretary of the club presented, was made by the Joseph Stokes Rubber Co., one of the latest concerns to enter the field of hard rubber manufacture.

=Chairman W. J. Kelly, of the dinner committee, and indeed the whole committee, are to be complimented upon the excellent menu that the banqueters discussed, altogether the best yet.

=Mr. George P. Whitmore, who is on the dinner committee and also the treasurer of the club, had the floral decorations in charge, and received many compliments on their excellence and appropriateness.

=As Mr. W. H. Gleason, assistant secretary of the club, was

to celebrate his silver wedding anniversary the next day, some very beautiful flowers that adorned the tables were sent him, with the cordial congratulations of the executive committee.

=Mr. William E. Barker, of the entertainment committee, who had the music directly in charge, made a most excellent selection, and proved, as has long been known to his intimates, that he is a lover of good music.

=Mr. Wu Ting-fang, envoy extraordinary and minister plenipotentiary from the Chinese Empire to the United States, a most delightful after dinner speaker, had planned to be present to speak on "Chinese Laborers in the Tropics," but, finding that his official duties would engross him during the whole of November, was unable to arrange to do so.

RUBBER SHOES AND THE GERMAN TARIFF.

IN connection with the proposals for a radical revision of the German import duties, to meet the views of the protectionist sentiment in that country, the *Handelskammer* (Chamber of Commerce) of Hamburg has made a study of existing trade conditions and prepared a report for the consideration of the government. The paragraphs which follow, in relation to rubber goods and particularly to rubber footwear, are translated from this report as found in the *Gummi-Zeitung*. It will be seen that the Hamburg chamber opposes an increase in the import duties on the goods referred to:

"An important item is No. 576—rubber shoes. It is proposed to raise the tariff on unvarnished shoes from 40 to 90 marks, per double hundred weight (220 pounds) and on varnished shoes from 60 to 100 marks. The board of trade heard the statements of eight rubber goods manufacturers, of whom six are not making shoes, and consequently have no intimate knowledge pertaining to them. The representative of the Harburg factory advocated a tariff, on varnished rubber shoes, of 120 marks, while the representative of the Leipsic factory, who are not making shoes themselves, but are carrying the product of the Russian-American India-Rubber Co., of St. Petersburg, to supply their customers, recommended that the manager of that factory be heard before the board in Germany; but this did not occur.

"There are only three factories in Germany engaged in the manufacture of rubber shoes. The Harburg factory produces, according to a statement of its director, 10,000 pairs for each working day, equal to 3,000,000 pairs per year; Hutchinson, at Manheim—a branch of a French firm—750,000 pairs a year; and Volpi & Schlieter, in Berlin, 325,000 pairs. These figures include rubber-soled canvas shoes, the export of which, as gleaned from well-informed sources, exceeds the import materially. Official statistics of these cannot be given, the custom house figures grouping them with other linen goods. Of rubber shoes, 637,900 kilograms were imported (including 450,100

kilograms from Russia) valued at 4,210,000 marks; there were exported 287,200 kilograms, valued at 1,723,000 marks.

"A comparison of 18 pairs of shoes from the Harburg factory with a corresponding lot from St. Petersburg showed the former to weigh 7804 grams, and to cost 39.06 marks, while latter weighed 7305 grams, and cost 47.29 marks. This figures the price for the Harburg shoes at 500 marks per double hundred weights, and that for the Petersburg shoes at 660 marks. These figures have been accepted and considered for recommendation by the imperial bureau of statistics, in fixing the import and export duties. But these are selling prices, which include expenses, profits, and, on foreign shipments, freight, and duty. The average price of foreign made shoes is about 500 marks, so that the present tariff represents about 12 per cent. *ad valorem*, and the proposed tariff about 20 per cent. If the assertion is made by the Harburg factory that their product is equal in quality to that of foreign manufacture, it is in line with their statement that they can hold their own with English factories in proofing fabrics, a statement which has proved a detriment to the German trade in waterproof goods and has succeeded in killing the efforts to bring it to greater perfection. All impartial experts agree that their statement does not hold true, and that the foreign manufacture, though being much lighter, is decidedly more durable.

"This is proved conclusively by the difference in the prices (for Roumania the Harburg factory concluded a price agreement with the St. Petersburg factory whereby the latter sell 15 per cent. higher than the former, and yet they have a preponderance of the sales). That the two are of entirely different quality is shown by the fact that the firm of Volpi & Schlieter have made the representative of the St. Petersburg factory their sole agent for Germany—a deal which is most profitable to themselves. It seems to be intended, therefore, to saddle the German public with higher prices for the superior goods, in favor

RATE OF DIVIDENDS EARNED BY GERMAN RUBBER FACTORIES FOR TEN YEARS PAST.

Names of Companies.	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
Vereinigten Gummiwaren-Fabriken, Harburg-Wien.....	24	25	20	22	29	29	24	12	17½	20
Continental Caoutchouc-und Guttapercha Co., Hanover.....	27	27	30	40	50	55	55	55	40	45
Hannover'schen Gummi-Kamm Co., Hannover.....	6½	12	17	21	16	20	22	18	11	12
Vereinigten Berlin Frankfurter Gummiwaren-Fabriken, Berlin.....	8	8	8	8	6	8	8	7	5	7
Vereinigten Hanfschlauch-und Gummiwaren-Fabriken.....	10	11	10	9	11½	12½	8	8	7	10
Carl Schwanitz & Co., Aktien-Gesellschaft, Berlin.....	—	12½	12½	9½	10	12	14	9	6	8
Gummiwaren-Fabrik Voigt & Winde, Berlin.....	8	8	8	7	6	6	6	6½	6½	6

of a single factory who find a ready market for their product, and are in a brilliant financial condition. It is urgently solicited to let the present tariff prevail.

"The Deutsche Gummiwaren-Fabrik, Aktien-Gesellschaft, vormals Volpi & Schlüter, who formerly manufactured mechanical goods only, and have recently, among other articles, taken up the making of rubber shoes, are the only rubber factory failing to declare a dividend in the later years. Specific reasons are the cause of this retrogression. The falling off of the dividends, especially during the years of 1898 and 1899, leads back directly to the then rapidly advancing prices of crude rubber. These same conditions have made themselves manifest in foreign rubber factories."

REPLY OF THE HARBURG-WIEN COMPANY.

PETITION TO THE CENTRAL SOCIETY OF GERMAN RUBBER GOODS FACTORIES, BERLIN:

In regard to the report of the Hamburg Board of Trade, we take the liberty of calling attention to the following points:

It is claimed that the Harburg shoe is inferior to that of foreign manufacture, but by the testimony of our customers, who handle Harburg as well as St. Petersburg shoes, we can prove that the Harburg shoe, when of equal price with the St. Petersburg shoe, wears at least as well as that.

Further, the comparison of weights and prices, as given in the report, is equally incorrect. Eighteen pairs of Harburg shoes weigh 9.300 kilograms and cost 62.10 marks; 18 pairs of St. Petersburg shoes, identical in shape and size, weigh 9.725 kilograms and cost 67.40 marks. This proves that the prices and weights are nearly alike.

100 kilos Harburg shoes represent a value of..... 668 marks.
100 kilos St. Petersburg shoes value of..... 693 marks.

When it is further pointed out that the prices are the selling prices, in which, for the foreign product, freight and duty are included, our answer to that is that the St. Petersburg shoes are sold direct to the retailer, with a discount of 33½ per cent., while our shoes go to several jobbers, and from them to the wholesaler, who sells to the retailer at an average discount of 35 per cent. By our *modus*, therefore, the whole middle trade participate in a fair profit, while the representative of the St. Petersburg factory reaches the retailer direct. The profit which we might derive, to offset the duty, freight, etc., on the St. Petersburg goods, goes to the German middle trade.

When in the report of the Hamburg Board of Trade, reference is made to our profits, we will state that they are derived from the great variety of our manufacture; we make numerous specialties, which yield a fair profit, in comparison to which the rubber shoe business, on account of the flooding of the market by Russian and American competitors, is simply a losing venture.

In regard to Roumania, we will state that our Harburg factory does not sell a single shoe there; our establishment in Austria attends wholly to that trade, so that statement on this part of the board of trade bears scarcely any relation to the German tariff. As a matter of information only, we may remark: In former years our Austrian factory did an extensive business in Roumania, but when the financial condition of our customers there became so as to give much cause for apprehension, we withdrew our trade, and thus enabled the representative of the St. Petersburg factory to gain a firm footing. When the financial conditions again became healthful, we sought our former market, and certain arrangements were entered into, by one of which we reserved the right of selling lower than the St. Petersburg factory. This price agreement was of equal advantage to both; on account of the risky financial conditions it was necessary to obtain higher prices to insure against loss.

Regarding the firm of Volpi & Schlüter, of whom it is said that they have profited by their agreement with the St. Petersburg factory, we have before us a letter from that firm, to the effect that the statement in the report of the Hamburg board of trade in no wise relates to them, and the best proof that they are not "spinning silk" in the rubber shoe business can be found in their financial *status*, no dividends having been declared by them since 1896.

We can only repeat that the rubber shoe business is not profitable, and, unless we are supported by the government, by laying a higher import duty on rubber shoes, it only remains for us to curtail that branch of our factory or close it up entirely, thereby depriving hundreds of workmen of their livelihood.

We believe that it is only right and fair to prevent Russia and the United States of America from bringing rubber shoes into Germany at a tariff of only 12 per cent. *ad valorem*, while we can export rubber shoes to those countries only at a duty of from 35 to 40 per cent. *ad valorem*.

It certainly is the intent of our government to retain to itself an industry strong in capital and profitable to its employés, and we hope that our desire for a higher tariff will be considered, and therefore beg that the respected Central Society of German Rubber Goods Factories use its influence in this regard in the proper quarters. Respectfully,

VEREINIGTE GUMMIWAREN-FABRIKEN HARBURG-WIEN.

A RUBBER FARM FOR SALE.

VARIETY is added to the pages of THE INDIA RUBBER WORLD this month by the admission of an advertisement of some productive rubber estates in the Amazon valley, that are offered for sale. Attention is called to the fact, as it illustrates the growing scope of the India-rubber interest. Not only are manufactures of India-rubber and the raw material itself bought and sold nowadays, but lands for forming plantations, and seeds and plants for the same, and now comes the entering wedge of a new condition in the crude rubber business, when the lands, recently wild, on which rubber grows native, are coming under private ownership and control. No doubt within ten years from now rubber lands in the United States of Brazil will be bought and sold as an ordinary business transaction, just as farming lands are bought and sold in our own United States.

AN ITEM OF NEWS FROM JAPAN.

KENZO OKADA writes to THE INDIA RUBBER WORLD from Tokyo, Japan, that his uncle, J. Fujikura, at the head of the Fujikura Insulated Wire Works, of that city, died on October 8, after an illness of several weeks. The business will be continued under the name of Fujikura Insulated Wire and Rubber Co., by Mr. Okada and other relatives of Mr. Fujikura, in connection with a new waterproofing plant which was already being planned. The late Mr. Fujikura was also one of the directors in the Oriental Rubber Manufacturing Co., of Tokyo. Mr. Okada, by the way, will be remembered with interest and pleasure in more than one American rubber factory in which he worked while preparing himself to take an active part in developing the rubber industry of his native country.

IN New York on November 13, the sheriff sold out 15 tons of old rubber shoes in storage at No. 32 Moore street for \$2200, under an attachment and execution against Herman Meyer, of Europe, for \$3096, in favor of the United States Rubber Co.

DEATH OF JAMES W. GODFREY.

ON the afternoon of November 9 a fatal accident befell James W. Godfrey, manager of the sales department of the India Rubber and Gutta Percha Insulating Co. (New York). While driving a valued trotting horse, he was thrown from his runabout, sustaining injuries which led to his death the same evening at the J. Hood Wright hospital in New York.

Mr. Godfrey was born in New York city September 15, 1855, and received a collegiate education. He began at once on



JAMES W. GODFREY.

[By courtesy of the *Electrical World*.]

with Dr. W. M. Habirshaw in the India Rubber and Gutta Percha Insulating Co., which lasted until his death.

No member of the branch of the trade with which Mr. Godfrey was identified was better known in connection with it, his acquaintance extending throughout the country. It is said that he knew personally some one connected with every electric lighting station in the United States. He was a member of the Electrical Society of New York, and was a regular attendant upon the electric lighting and other similar conventions, taking special interest in the exhibitions held in connection with them, and aiding in the latter both with his advice and in a financial way. He was also an active member of the Electrical Contractors' Association of New York, and was secretary of the Dale Co., manufacturers of electric light supplies. Mr. Godfrey took an active part in building up an export trade in electrical goods, especially in the far East.

The funeral exercises took place on November 12 and the interment was private. The Episcopal services were rendered at the late home of Mr. Godfrey, and a Masonic service was also conducted by Rome Lodge. Mr. Godfrey is survived by a widow and two daughters, one of whom is married.

THE GERMAN OXYLIN WORKS.

THE directors of the Oxylin-Werke, Aktiengesellschaft (Piesteritz, Germany), issued early in October a circular to the creditors of the company, stating that after the failure of the Leipziger Bank, they found it impossible elsewhere to renew the credit for 600,000 marks which had been allowed by that institution. The directors thereupon agreed upon terms with the Leipziger Gummiwaaren-Fabrik, Akt.-Ges., whereby the Oxylin works should be transferred to the latter firm on September 28 last, subject to the sanction of the stockholders of the Oxylin company at a general meeting. At such meeting, on September 25, the desired sanction was not granted. Meanwhile the Oxylin works had lost six week's time. There has since been held a meeting of the principal creditors of the Oxylin company, representing nine-tenths of the indebtedness, who have consented to an extension of time for the settlement

of their claims. These creditors, it is stated, are of the opinion that the works can be disposed of advantageously. For these reasons the directors ask from all creditors an extension to the end of this year.

RUBBER INDUSTRY IN THE CENSUS.

CENSUS Bulletin No. 93, issued from Washington, is devoted to manufactures in Rhode Island for the period covered by the census—the year ending June 30, 1900. Bulletin No. 109 contains similar information for the state of Connecticut. From these bulletins is compiled the following details regarding the rubber industry in the two states named:

RHODE ISLAND.

	Rubber Boots and Shoes.	Rubber and Elastic Goods.
Number of establishments.....	6	9
Total capital.....	\$7,379,867	\$1,631,869
Land	\$141,027	\$42,500
Buildings.....	\$1,227,456	\$10,858
Machinery.....	\$976,185	\$975,843
Cash and Sundries.....	\$5,045,677	\$1,152,628
Salaried officers and clerks.....	105	63
Salaries	\$124,955	\$88,732
Average number wage earners.....	3,170	1,039
Men	1,726	480
Women	1,350	550
Children under 16.....	84	9
Total wages.....	\$1,281,705	\$359,244
Miscellaneous expenses.....	\$443,853	\$200,011
Rent of works.....		\$16,300
Taxes.....	\$8,888	\$1,710
Rent of offices, interest, etc.....	\$434,095	\$180,001
Cost of materials.....	\$3,794,027	\$1,659,676
Principal materials.....	\$3,731,730	\$1,637,271
Fuel and rent of power.....	\$62,297	\$22,405
Value of products.....	\$8,034,417	\$2,518,268

The Bulletin says: "Special attention should be called to the manufacture of rubber boots and shoes. There was one establishment engaged in this industry in 1890, and its statistics, therefore, were included in the group of 'All other industries,' and cannot be used for the purpose of comparison with the totals for 1900. Six establishments were reported for the manufacture of rubber boots and shoes in the twelfth census, with a product valued at \$8,034,417, and the industry ranked fourth in importance according to the value of its products."

CONNECTICUT.

	Rubber Boots and Shoes.	Rubber and Elastic Goods.
Number of establishments.....	5	22
Total capital.....	\$9,530,718	\$6,094,867
Land	\$90,400	\$334,447
Buildings.....	\$856,613	\$843,200
Machinery.....	\$1,209,401	\$1,355,131
Cash and Sundries.....	\$7,174,304	\$3,562,089
Salaried officers and clerks.....	107	255
Salaries	\$150,396	\$303,532
Average number wage earners.....	4,217	3,006
Men	2,453	1,681
Women	1,739	1,187
Children under 16.....	17	138
Total wages.....	\$1,986,023	\$765,776
Miscellaneous expenses.....	\$405,852	\$152,293
Rent of works.....		\$14,886
Taxes.....	\$40,177	\$22,745
Rent of offices, interest, etc.....	\$354,435	\$15,862
Cost of materials.....	\$7,176,701	\$5,697,899
Principal materials.....	\$7,105,073	\$5,610,708
Fuel and rent of power.....	\$71,618	\$87,197
Value of products.....	\$11,999,038	\$8,246,240

The Connecticut bulletin contains a note on the work done in this state by Charles Goodyear in the development of the rubber industry. The census of 1890 showed in Connecticut 16 "Rubber and elastic goods" factories, with \$2,300,590 capital, employing an average of 2245 hands, using \$2,093,148 worth of materials, and producing goods worth \$3,476,390.

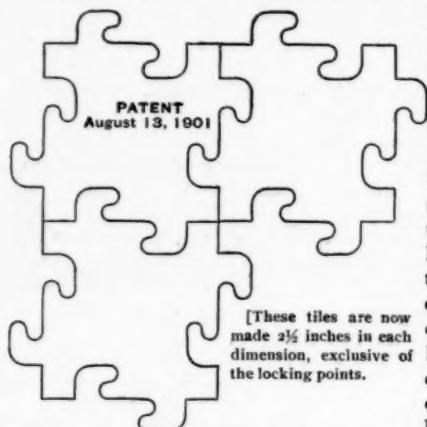
The increase in the rubber industry shown by this census promises to be greater than for any other within forty years. It is interesting to note that these returns are coming forward much more promptly than ever before,

NEW GOODS AND SPECIALTIES IN RUBBER.

THE "MASTER KEY" TILING.

THE new rubber tiling here illustrated has received its name because each piece is complete in itself and is in a sense a master key to the locking and interlocking with its fellows. The advantages claimed for this tiling are: (1) It makes a stronger and safer lock than other tiles; (2) only one shape of tile is needed to complete the covering of any floor; (3) a greater number of designs may be made than with other tiles; (4) borders and fields may be made with either odd or even numbers of tile; (5) all figures in designs balance, not appearing heavier at one end than at the other; (6) any other design may be reproduced, and peculiar designs may be furnished which may not be duplicated by the use of any other tile; (7) tiles may be made in all colors; (8) it is more artistic than other tiles; (9) tiles may be cut in half or quarter, using different colors, while still retaining the locking, or lockfast, principle; (10) old tiles may be replaced with new at any time.

The "Master Key" tile is covered by a series of strong patents, on principle and design, granted in the United States and



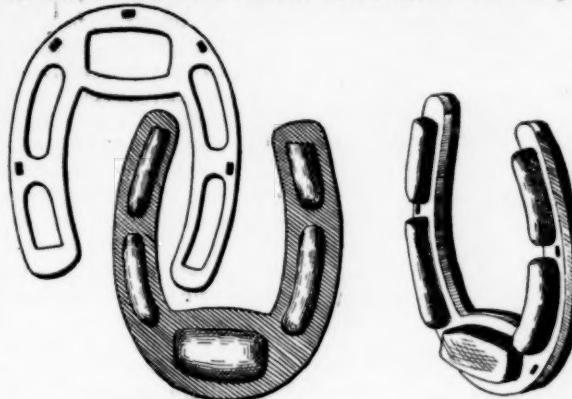
[These tiles are now made $2\frac{1}{2}$ inches in each dimension, exclusive of the locking points.

believing it to be superior to anything of the sort hitherto known, has withdrawn from his old position and has associated himself with the new tiling department of the Alden Rubber Co. The inventor dwells especially upon the almost unlimited opportunity afforded to the designer through the simplicity and completeness, each piece in itself, of the new tiling. A book has been compiled, of colored diagrams displaying more than 100 complete designs, suitable within their range for any taste and for any purpose, from the smallest elevator floor to the largest halls.

J. C. Pierrez (No. 91 Reade street and No. 107 Chambers street, New York) is at present showing the new tiling to prospective purchasers at his place of business. Mr. Pierrez is sales agent for the new People's Hard Rubber Co., of Akron, Ohio, whose factory is nearing completion, but while waiting for his company to begin active operations he has acquired an interest with the inventor in the new tiling patents and will devote some attention to the tiling trade. The Alden Rubber Co. (Akron), proprietors of the Barberton Rubber Works, have the exclusive control of the manufacture and sale of the "Master Key" tiling.

STROUD CUSHION PAD SHOE.

THIS shoe is composed of a steel frame resembling a common horseshoe with wide web, the latter containing five apertures, one at the toe and two on each side, and a rubber pad



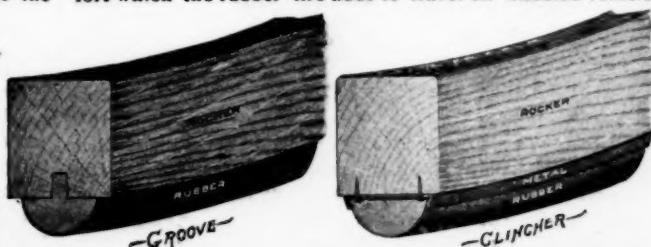
STEEL FRAME AND RUBBER PAD.

SHOE COMPLETE.

with five pendant calks to correspond. Each of the calks fits into an opening in the frame, the pad going between the steel frame and the horse's hoof, leaving the calks to pass through and rest on the ground, bearing the weight of the horse and placing him upon three-fourths of an inch of solid rubber. A thin layer of webbing on the inner surface of the pad prevents the rubber from coming in contact with the hoof. This rubber pad and the rubber calks relieve the horse from jarring and concussion while traveling and also prevent slipping on wet asphalt or other pavements, enabling the animal to travel with safety even on rough ice, for which purpose the rubber is better than dull steel calks. The claim is made for this style of horseshoe that it places the weight of the horse where it belongs, viz.: on the outside wall of the hoof, and not on the sensitive bottom, or across the frog, as is true of some rubber pads. Nor does this shoe cover the bottom of the foot, and thus exclude the air from it. The Stroud horseshoe is sold complete, at a price not greater than many smiths charge for the best quality for shoe, and not as much as ordinary shoes and rubber pads cost when bought separately. [The Stroud Cushion Pad Shoe Co., No. 88 Front street, Worcester, Massachusetts.]

RUBBER TIRE FOR ROCKING CHAIRS.

AND now comes an inventor with the idea that the same comfort which the rubber tire adds to travel on wheeled vehicles

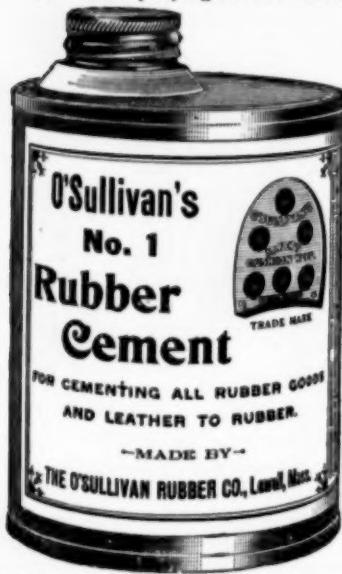


may as well be enjoyed in some degree to those whose exercise goes no further than in the use of the rocking chair. The two cuts herewith illustrate two styles of attaching the "Springfield

Rubber Tire for Rocking Chairs." Any carpenter or mechanic will be able to apply these tires, by using the grooving tool, tacks, etc., supplied with them. These chair tires have been recommended for hospitals, by many physicians, and have proved satisfactory on hotel verandas, in addition to their advantages for use in homes. [Springfield Rubber Tire Rocker Co., Springfield, Ohio.]

O'SULLIVAN'S RUBBER CEMENT.

THE accompanying cut illustrates the appearance of a can of rubber cement, as placed on the market by the O'Sullivan Rubber Co. (Lowell, Massachusetts), the rubber heel and sole manufacturers. The company state that "This cement was put on the market through necessity." That is, some dealers were found to be enthusiastic over the company's rubber soles, and some were not. Investigation showed that "it was all on account of the cement." As they write to THE INDIA RUBBER WORLD: "When we made our rubber soles, they had to be attached to the leather sole, and we saw then the necessity of making a rubber cement that would do the work effectively."



"HOLDFAST" UNLOSABLE STOPPER.
THE idea of this recently patented device may be gained readily by an inspection of the various illustrations which appear herewith. Ever since hot water bags have been used, their owners have been losing or mislaying the stoppers. There never has been a way of keeping the bag and the stopper in the same locality, except by tying them together with string, ribbon, or other makeshift, and these always become wet, soggy, and twisted into uselessness. It is said that heretofore no device was known by which one



SECTIONAL VIEW.



PAT'D AUG. 6TH AND OCT. 1st, 1901.



PAT'D
AUG. 6TH,
OCT. 1st,
1901.

could fasten the stopper to the bag and yet allow the stopper to turn easily. The "Holdfast" unlosable stopper, for which two patents have just been granted, is offered as a solution of the difficulty. The stopper has a loose revolving ring below the handlebar to which ring a neat chain is secured, which is attached to the handle of the bag. The most notable thing about it is its simplicity and the fact that it never entangles. The stopper never gets lost. The "Holdfast" stopper was pat-

ented in the United States August 6 and October 1, 1901, and additional patents in this country are pending. These patents are protected against infringement by the Patent Title and Guarantee Co. (New York). Patents have also been applied for in Canada, Great Britain, and Germany. The exclusive right to manufacture these stoppers is controlled by A. Schrader's Son, No. 32 Rose street, New York.

COMBINATION SYRINGE AND WATER BOTTLE.

THE article illustrated in the accompanying engraving forms an exceptionally complete outfit in the way of a fountain syringe and water bottle. The tubing connections and pipes are of a larger internal diameter than usual, to admit of rapid flow. Each syringe is packed in a handsome paper box, with hard rubber vaginal irrigator, curved vaginal pipe, rectal and infants' pipes, and metal shut off and screw hook. The water bag is made of maroon rubber, with black trimmings, so designed as to present an attractive appearance. This combination as a whole is protected by patents, and bears the brand "Special."—Under the same patents are made the "Special" water bottles, also of maroon rubber and with black trimmings. These goods are offered at a higher price than many other water bottles, but are guaranteed for two years. [Whitall Tatum Co., Nos. 46-48 Barclay street, New York.]

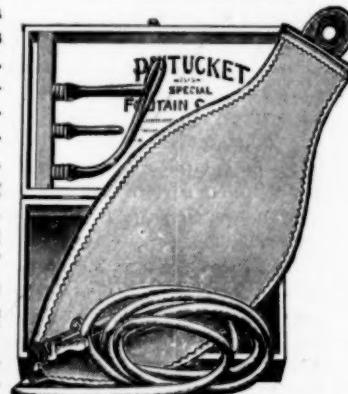


"PENTUCKET SPECIAL" FOUNTAIN SYRINGE.

THIS cut represents the form of the "Pentucket Special" fountain syringe, from a new line of rubber goods introduced by The H. E. Webster Co., Inc., successors to John A. Webster & Co., No. 21 Blackstone street, Boston. The house has been long established as manufacturers, importers, and jobbers of druggists' glassware, in connection with which they have handled other druggists' sundries. Since the beginning of September last they have been having a special line of syringes and hot water bags manufactured for their trade.

VENN'S PATENT SHOE MARKER.

IN the article on Mr. Venn's shoe marker, published in this department of THE INDIA RUBBER WORLD for September 1



[page 361] an error occurred in stating the capacity of the device, which that gentleman asks to have corrected. As printed, the statement read: "The operator can mark, on the average, about 600 pairs per hour on the last, and from 1000 to 13,000 off the last." The latter figures, of course, should have been **1300.**

PAD CLEANER AND INK DISTRIBUTOR.

EVERY user of a rubber stamp desires, naturally, to get a good impression from it. Hence it is important that the stamp



FIG. 1.

be kept clean—that is, free from dust and also lint from the stamping pad. In the accompanying illustrations Figure 1 shows a new article made of India-rubber—a stamp and pad cleaner, described as "a combination of a brush having hexagon-shaped teeth on one side and a three blade scraper on the other side, made entirely of rubber, into which is inserted a handsomely finished wooden handle."

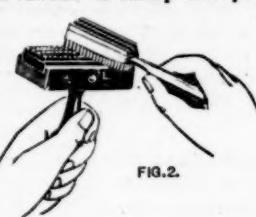


FIG. 2.

Figure 2 shows the method of cleaning a rubber stamp with this new device. All foreign substances can thus be removed without marring or cutting the stamp. If the dry brush will not remove dirt that has become caked on the stamp, soap and water may be used. Of course it is equally important, in using a rubber stamp, that the ink pad should be clean. The cleaner



FIG. 3.

above described is equally adapted for this purpose, as indicated by Figure 3. Finally, this handy little device can be put to another use—helping to replenish the supply of ink in the pad, as shown in Figure 4.

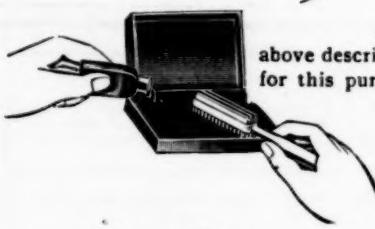


FIG. 4.

After the pad has first been filled, a small amount of stamp ink is poured on, and then distributed thoroughly with the brush side of the distributor. The retail price is 35 cents.] The Superior Rubber Type Co., No. 126 Market street, Chicago.]

RECENT RUBBER PATENTS.

UNITED STATES PATENT RECORD.

ISSUED OCTOBER 1, 1901.

NO. 683,450. Horseshoe pad. Charles Ehlers, West Hoboken, New Jersey.

683,638. Wheel tire. George H. Clark, Boston, Massachusetts.

683,740. Pneumatic wheel tire. Albert M. Ferguson, Winnipeg, Canada, assignor of two thirds to Thomas C. Allum and Henry D. Metcalfe, Montreal.

ISSUED OCTOBER 8, 1901.

683,991. Waterbag for the head. Stella Rowe, Cincinnati, Ohio.

684,050. Manufacture of tires for vehicle wheels. Henri Falconnet and Maurice Perodeaud, Choisy-le-Roi, France.

684,078. Breast pump. William H. Martin, New York city.

684,108. Process of lining pneumatic tires. Joseph Savoie, Central Falls, Rhode Island.

684,146. Apparatus for applying rubber tires to vehicle wheels. John G. Webb, Springfield, Ohio, assignor to the Victor Rubber Co.

684,157-684,158. Elastic tire. William F. Williams, London, England.

684,273. Rubbertire. William W. Leavenworth, Batavia, New York.

ISSUED OCTOBER 15, 1901.

684,416. Soft tread horseshoe. Brian J. Downey, Washington, D. C.

684,550. Pneumatic tire for vehicles. Charles A. Pettie, Brooklyn, New York.

684,557. Removable elastic heel pad. Neil Stalker, West Hartford, Connecticut.

684,647. Means for plugging pneumatic tires. Hans P. Madsen, New York city.

684,701. Water bag. Christian W. Meinecke, Jersey City, New Jersey, assignor to Meinecke & Co., New York.

ISSUED OCTOBER 22, 1901.

684,935. Elastic horseshoe. Joseph Hirsche, Kansas City, Missouri.

685,002. Pneumatic tire for vehicles. Isaac S. McGiehan, New York city.

685,038. Substitute for rubber and process of producing same. Pearis B. Ellis and Albert Y. Werner, Carson City, Nevada.

685,041. Washing rubber. Louis C. Gerken, New York city.

685,077. Elastic tire. William F. Williams, London, England.

685,158. Life preserver. Icilius W. Maccolini, Inwood, New York.

ISSUED OCTOBER 29, 1901.

685,450. Vehicle wheel and means for attaching rubber tires thereto. William J. Keat, Brooklyn, New York.

685,491. Composition for mending punctures in pneumatic tires. Lewis D. Scott, Friendship, and Robert B. Nephew, Hornellsville, New York.

685,627. Vehicle wheel and tire. Charles Miller, Binghamton, New York.

DESIGN PATENTS.

35,173. Horseshoe pad. Frank S. Smith, Chicago, assignor to William McLaren, same place. Issued October 8, 1901.

35,209. Vehicle tire. Alvie V. Kiser, West Liberty, Ohio. Issued October 22, 1901.

ENGLISH PATENT RECORD.

APPLICATIONS.—1901.

18,036. George Frederick Priestley, Clun House, Surrey street, Strand, London. Pneumatic and rubber lined shoes for horses. September 10.

18,142. John Adair, John's Hill, Waterford. Pneumatic tires and connections. September 11.

18,146. John Eckersley, Preston, Lancs. The "J. E." non-slipping and unpuncturable tire for vehicles. September 11.

18,235. James Edgar Hatch, Clun House, Surrey street, Strand, London. Resilient tires for cycles and carriages. September 12.

18,351. Lewis Johnstone, Southampton buildings, Chancery lane, London. Pneumatic tire covers and the manufacture thereof. September 13.

18,441. William Frederick Tupper, 27, Chancery lane, London. Pneumatic tires. September 14.

18,450. James Henry Wallace and Andrew Nixon Macalister, 100, Wellington street, Glasgow. India-rubber protecting ring for umbrellas. September 16.

18,452. Arthur Cook, Quinton, near Birmingham. Puncture sealing device for pneumatic and tubeless tires and air tubes. September 16.

18,475. James Hearth and Edward Everard Preston, 111, Hatton garden, London. Pneumatic tires. September 16.

18,501. William Robert Lake, 45, Southampton buildings, Chancery lane, London. Protecting covers for pneumatic tires. September 16.

18,528. David Noble Bertram and Samuel Milne, Manchester. Improvements in the manufacture of Gutta-percha. September 17.

18,539. Reuben Heaton, Birmingham. Self inflating pneumatic tire, in compartments. September 17.

18,566. Hugh Taylor Stephens, 7, Quay street, Carmarthen. Improved means of the conservation of pneumatic tire covers. September 17.

18,599. Martin Zakheim and Leopold Ernest Butcher, 4, South street, Finsbury, London. Improvements in the inflation of pneumatic tires. September 17.

18,689. Lewin Karmel, Nottingham. Means for repairing pneumatic tires. September 19.



RUBBER GOODS

Our three brands,—single, double and triple diamond,—correspond to three qualities. A single diamond means "Carbon" grade—a good article; a double diamond means "Double Diamond" grade—a fine article; a triple diamond means "1846 Para" grade—a splendid article and the best we can make. Our brands on hose, belting, packing

*Belting,
Garden Hose,
Water Hose,
Fire Hose,
Suction Hose,
Steam Hose,
Air Hose,
Tubing,
Rod Pucking,*

*and other rubber goods are
guarantees of high quality and
long service.*

*Chicago, 150 Lake St.
St. Louis, 411 No. Third St.
San Francisco, 509 Market St.
Boston, 24 Summer St.
Philadelphia, 724 Chestnut St.*

*C. I. Pucking,
Ruby Pucking,
Gaskets,
Valves,
Rubber Tiling,
Rubber Matting,
Emery Wheels,
Specialties,
Vehicle Tires.*

NEW YORK BELTING & PACKING CO. LTD

PIONEERS AND LEADERS—25 PARK PLACE, NEW YORK.

Mention The India Rubber World when you write.

GARDEN HOSE FOR 1902.

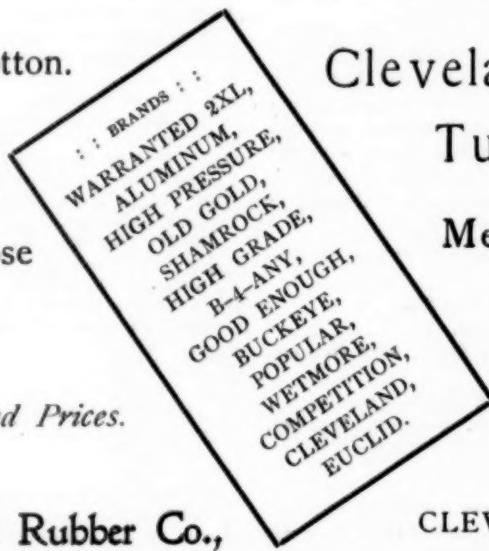
Rubber Lined Cotton.

Three, Four, Five
and Seven ply Hose

—ALL COLORS.—

Write for Samples and Prices.

The Mechanical Rubber Co.,



Cleveland Seamless
Tube Hose

Means Larger Sales,
No Complaints
For the Jobber.

CLEVELAND, OHIO.

Mention The India Rubber World when you write.

RUBBER PRODUCTION OF THE CONGO RIVER COUNTRY.

THE output of India-rubber this year from the Congo Free State alone can hardly fail to reach 12,000,000 pounds, besides which portions of French Congo and other regions adjacent to the Congo river help to swell the rubber shipments by that great waterway. It is one of the wonders of the crude rubber trade, how rapidly it has been developed in this particular state, and how well the production has been maintained. The explorer Stanley proved to be right when, eleven years ago, on emerging from a journey across central Africa, he described the Congo forests as a "reservoir of rubber." Already some rubber had been marketed from the Congo Free State; some of it, indeed, had appeared the year before—in 1889—at Antwerp, thus affording a beginning to what has become one of the world's great rubber markets. But the world had yet to learn how vast were the rubber resources of "the dark continent."

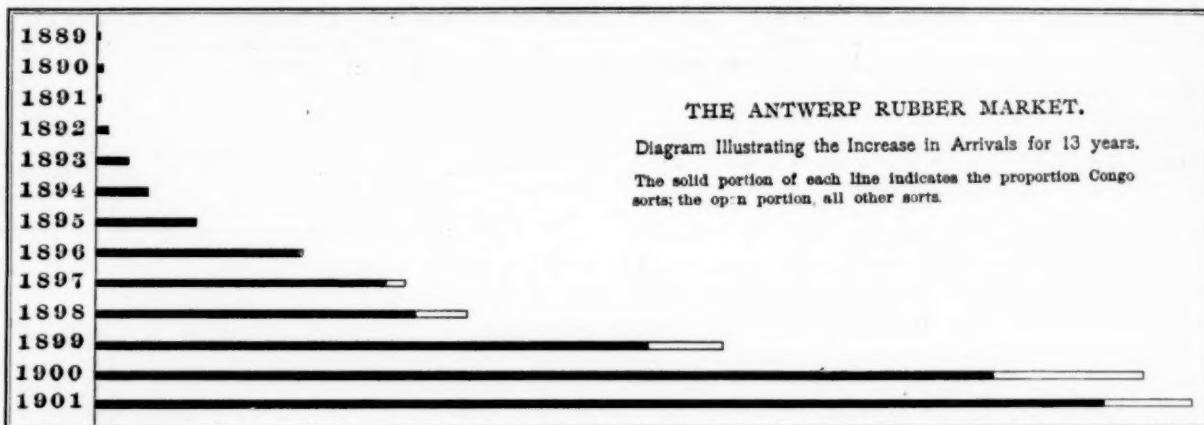
While other sources of African rubber supplies—as Sierra Leone, Gold Coast Colony, Lagos, Angola, Mozambique, and Madagascar—have had their "boom," followed by a decline in production, rubber from the Congo continues to come, in an ever swelling volume. Of course the supply cannot continue

YEARS.	Pounds.	YEARS.	Pounds.
1889.....	10,340	1896....	(20,900) 2,454,925
1890.....	66,000	1897....	(266,844) 3,694,139
1891.....	46,200	1898 ...	(616,629) 4,432,100
1892.....	138,523	1899....	(903,025) 7,486,336
1893.....	367,821	1900....	(1,751,270) 12,535,677
1894.....	600,076	1901....	(Partly estimated)
1895.....	1,168,363		(1,020,956) 13,096,409

[Arrivals for 1901 reported only to October 31.]

MORE RUBBER FOUND IN THE FRENCH CONGO.

AN important discovery of new rubber supplies is reported from the French Congo. For some time past the Commercial Society of the French Congo has had charge of explorations of the regions north of the Mobangi, an important tributary of the Congo river. Lately Georges Seguin, a member of this society, ascended the Kuango tributary of the Mobangi river for 300 miles. He found the banks densely populated with a race well developed physically, and engaged in the cultivation of small farms. Mr. Seguin found the country rich in rubber creepers of the genus *Landolphia*, though the people possessed no knowledge that rubber had any commercial value. Mr. Seguin reports that most of the natives he saw in the Kuango basin expressed a willingness to engage in collecting rubber.



to increase indefinitely in the same proportion, the world could not consume the rubber if it did. It would not be surprising if any year now should mark the beginning of a decline in the Congo rubber output, but the fact that no signs point as yet to this end tends to keep rubber manufacturers from fearing a shortage in raw material for a good while to come.

The accompanying diagram is based, not upon the rubber exports from the Congo Free State, but upon the arrivals at Antwerp, the greater part of which are from this source. The first rubber shipped from the Congo found its way to the rubber markets already established, and the four or five tons that reached Antwerp in 1889 did not comprise all the Congo production, which amounted that year to about 130 tons. But in time practically all the rubber from the Free State began to be consigned to Antwerp, in addition to which, in the past few years, various other kinds of rubber—including Pará even—have reached that market.

The following table denotes the total quantity of the rubber arrivals at Antwerp, in each year, and also (in parenthesis) the amount of rubber other than Congo sorts during the past six years:

and to open friendly relations with European traders.—The exports of rubber from the French Congo during 1899 are officially reported at 1,445,400 pounds.

PROFITS OF ONE CONGO RUBBER TRADING COMPANY.

LA *Gazette Coloniale*, of Brussels, in a recent issue, said that reports were current of an arrangement being concluded between the Société Abir and the Congo Free State government, under the terms of which "the company would be re-established in its former privileges, the suppression of which has caused a notable decrease in rubber production." The report had not, however, been confirmed officially.

The Anglo-Belgian India-Rubber and Exploring Co. was organized in Brussels August 2, 1892, and reconstituted January 31, 1898, as "Abir, Société à responsabilité limitée." The capital is stated at 1,000,000 francs, in 2000 parts of 500 francs each, the original value of which is not designated. According to *The Speaker*, of London, in its issue of August 25, 1900, one-half the capital is held by the Congo State government, or, in other words, by the king of the Belgians. The Société Abir, in fact, is one of the five companies ostensibly under private control, which have been engaged in collecting rubber in the

Domaine privé, for which privilege it has been necessary to make a liberal division of profits with the government. What is meant by the recent suppression of the Abir's privileges, and their proposed reestablishment, referred to in *La Gazette Coloniale*, requires further explanation. Certainly there has been seen, from this side of the Atlantic, no decline in the amount of Caoutchouc handled by the Société Abir.

The last INDIA RUBBER WORLD reported from Antwerp that "on October 7 a large transaction was concluded for the United States," covering about 332 tons of Lopori sorts. According to *La Gazette Coloniale*, this rubber belonged to the Société Abir. On September 7 the steamer *Philippeville*, from the Congo, arrived at Antwerp with 810 tons of rubber, of which 265 tons were credited to the Abir. The total arrivals at Antwerp for the Abir, during twelve months past, according to THE INDIA RUBBER WORLD's record, have amounted to 822 metrical tons, or 1,809,277 pounds of rubber. These figures, however, have not been as large as had been predicted.

A Brussels newspaper in February, 1900, reported that "the company will henceforth produce 100 tons of rubber monthly, which would make, at 6 francs profit per kilogram, 7,200,000 francs." But rubber was selling at a high price then. In July, 1900, it was supposed, on the Brussels bourse, that the Abir had received and sold during the preceding six months about 800 tons of rubber, with an average profit of four francs per kilogram [35 cents per pound], which would give a profit of 3,200,000 francs profit for the half year. It may be stated that trading in the shares of this, and other African rubber trading companies, on the bourses of Antwerp and Brussels, is influenced by the amount of rubber handled by them, and also by fluctuations in the price of rubber. Thus a report in regard to "Abir" in May last: "It is announced that a shipment of 800 tons of rubber for this powerful company is imminent [but it never came to hand], and it seems probable that the shares will be subject to an important increase in valuation."

The profits of the Société Abir, based chiefly on rubber, but also to some extent on ivory, have been, for two recent years:

For 1898.....	2,482,697 francs=248 per cent.
For 1900.....	4,873,356 francs=487 per cent.

At the beginning of 1900 shares in Abir were quoted at 14,500 francs, or 29 times the nominal value; at the beginning of 1900 the quotation was 17,600 francs, or 35 for one; by September, 1900, the figure rose to 28,925, or practically 60 for one; at the beginning of this year the rate was 25,075, or 50 for one. During the year there has been a steady decline, in keeping with generally falling values on the Belgian bourses, the rate on October 25 being only 15,050 francs.

It may be of interest to quote here from *The Speaker*—the London journal already referred to: "So far as the present writer is aware, no allegations of ill treatment of the natives have ever emanated from the districts where the Société Abir conducts its operations." And a note in *La Gazette Coloniale* says: "The relations between the agents and the native population have always remained satisfactory."

Another statement in the last named journal is that the company has engaged largely in the planting of rubber creepers (*Landolphia*), to provide against the exhaustion of the supply of rubber.

ABOUT importations of rubber articles into Russia, it is officially reported from Kiew: "Rubber goods for surgical purposes, which previously came exclusively from Germany, are now also manufactured of equally good quality within this country."

EXPORTS OF AMERICAN RUBBER GOODS.

THE values of exports from the United States of goods classed as "manufactures of India-rubber" during the first nine months of 1901, compared with former years, are stated officially as follows:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
Jan.-June.....	\$300,095	\$200,267	\$920,934	\$1,420,706
July.....	51,554	91,089	153,488	296,121
August.....	47,268	102,951	129,264	279,483
September.....	48,736	173,090	118,029	339,855
Total, 1901	\$447,653	\$567,397	\$1,321,115	\$2,336,165
Same, 1900	401,604	411,809	1,117,539	1,931,042
Same, 1899	(a) 153,462	203,921	1,147,165	1,504,548

(a) Included in "All Other" prior to July 1, 1899.
[Exports to Hawaii and Porto Rico not included.]

There were exported in September 471,276 pairs of rubber footwear, against 137,844 pairs in September, 1900, and bringing the total exports for the present calendar year up to 1,366,322 pairs.

Exports of reclaimed rubber, from January 1 to September 30:

	1899.	1900.	1901.
Value.....	\$324,604	\$415,285	\$263,195

AMERICAN IMPORTS OF RUBBER GOODS.

THE value of the imports of India-rubber and Gutta-percha goods during the first nine months of the three past calendar years has been as follows:

	1899.	1900.	1901.
India rubber goods.....	\$333,986	\$432,907	\$363,254
Gutta-percha goods.....	109,386	210,576	86,575
Total Imports.....	\$443,372	\$643,483	\$449,829
Re-exports.....	57,848	13,319	9,980
Net Imports.....	\$385,524	\$630,164	\$439,849

NEW TRADE PUBLICATIONS.

THE BOSTON WOVEN HOSE AND RUBBER CO. have issued a "Catalogue of Marine Rubber Goods," comprising hose (fire, suction, steam, wash-deck, and ash-sprinkling), hose pipes, couplings, and strainers, of special design, best suited to and approved for use in merchant or government vessels; also packings, gaskets, mattings, and tiling required aboard ship. The reason for the preparation of a special catalogue of this character lies in the fact that the quality and general construction of hose and appurtenances for marine purposes differ in many instances from goods for kindred uses ashore. This pamphlet is designed, therefore, to afford assistance to purchasers in determining the quantity, quality, sizes, and lengths of hose required by steam vessels, together with the most suitable nozzles, etc., not only for merchant steamers as required by law governing such equipment, but as specified for the United States navy. In addition to the illustrations of the goods described, the booklet is embellished with full page half-tone views of the more notable vessels in the American navy, [5½"×9". 44 pages.]

B. F. STURTEVANT CO. (Boston) have issued their Catalogue No. 114—"The Sturtevant Steam Hot Blast Heating and Drying Apparatus and Dry Kilns." It is attractive in appearance, interesting as reading matter, and illustrated in a manner that will compel attention. [6½"×9½". 86 pages.] The Sturtevant catalogues ought to prove interesting reading in the office of every rubber factory.

NEWS OF THE AMERICAN RUBBER TRADE.

EXTENSIVE FACTORY IMPROVEMENTS.

THE Gutta Percha and Rubber Manufacturing Co. (New York) are making extensive additions and improvements to their works on Franklin and Skinman avenues, Brooklyn. A new power press and Custodis stack are being erected—to accommodate four Babcock & Wilcox water tube boilers of 300 horse power each. Their sprinkler system is being enlarged and carried over the entire plant, supplied by a 15 gallon water tank supported on steel frames. The company have contracted with the Farrel Foundry and Machine Co. for several mills and calenders; also for large four platen press of new design and great power. All these improvements have been under way for some time and will be completed about January 1, 1902.

PROGRESS OF THE VOORHEES COMPANY.

A SHORT three years ago the Voorhees Rubber Manufacturing Co. (Jersey City, New Jersey) began business in a modest way. Two years later, a large increase in their orders demanding more room, they erected a substantial four story building. To-day they are making a further addition of a two story brick building. Both of these buildings and the original plant are equipped with the very latest rubber machinery, a noted addition being the largest hydraulic belt press now in use. The Voorhees company are noted for the high quality of goods that they turn out, and are the inventors of a number of valuable specialties which are having a very large sale. For example, the "Nubian" packing, which is theirs, has gained friends from the start, and has brought it commendation from the highest sources. An interesting feature about this packing is that the United States cruiser *Montgomery* has been equipped with it throughout, under a strong endorsement by the government for all claims made by its manufacturers.

STOUGHTON RUBBER CO.'S EXTENSION.

THE Stoughton company have decided to add to their present lines of manufacture, the production of certain mechanical specialties on which they hold exclusive patents. In order to accommodate the new work several buildings, constituting practically a new and complete factory, are being erected on a tract of two acres lately bought by the company for this purpose. It is expected that about 100 employés will be added to the company's pay roll.

THE KOKOMO INCREASES ITS CAPITAL.

THE officers of the Kokomo Rubber Co. (Kokomo, Indiana) have filed a certificate with the secretary of state of Indiana, to the effect that the paid up capital of the company has been doubled. The Kokomo company was incorporated early in 1896, and its capital is now four times as large as in the beginning.

PITTSBURGH RUBBER AND LEATHER CO.

THIS company has been organized for the purpose of taking the distribution, in the territory of which Pittsburgh is the commercial center, of the Diamond Rubber Co.'s products. The company also acts as distributors for the Charles Munson Belting Co. (Chicago). The president of the company is *W. B. Miller*, secretary of the Diamond Rubber Co., at Akron. The vice president is *W. C. Rae*, who was formerly vice president and general manager of the Charles Munson Belting Co. of Pittsburgh. The secretary and treasurer is *J. W. Paul*, formerly manager of the Pittsburgh branch of the Revere Rubber Co. A

letter from an official of the company says: "The prospects for business in this territory were never brighter, and we look for a prosperous business for some time to come." The company is a partnership association, organized August 22, 1901, with \$9000 capital.

JAMES W. BYRNES BELTING AND HOSE CO.

THIS very successful company, with principal store in St. Louis and branches at Kansas City and Joplin, Missouri, dealing in mechanical rubber and leather goods, is about to open a buying office in New York. The company was incorporated in January, 1897, with \$10,000 capital, paid up. The amount was increased in January, 1899, to \$20,000, and one year later to \$40,000. The undivided profits now are \$10,000. The business is confined to all kinds of belting, hose, packing, fire hose, and fire apparatus. The goods sold are made under the company's own brands, to its own specifications. Thirty people are employed, including six men traveling in seventeen states in the Mississippi valley and farther west. James W. Byrnes is president, Edwin Rumsey vice president, and William B. Robinson secretary.

EMPIRE RUBBER SHOE CO. BANKRUPT.

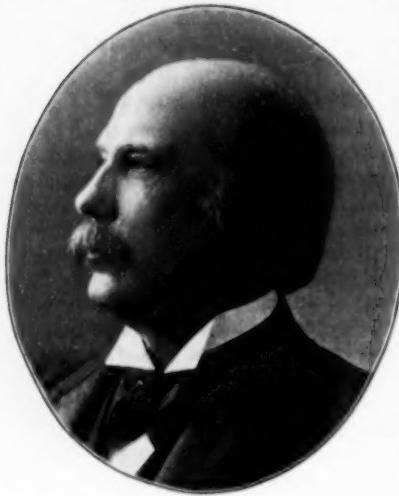
ACREDITORS' petition in bankruptcy against this company was entered November 17 in the United States district court at Providence, Rhode Island. The creditors who signed were Clarence V. N. Radcliffe (treasurer of the company), J. F. Mulvey Plumbing Co., and Woonsocket Electric Machine and Power Co. The Empire company was incorporated under New York laws May 31, 1901, and leased the rubber shoe factory of the Model Rubber Co. (Woonsocket), the operation of which by the new company began on June 10.—The Empire State Rubber Co., incorporated by the same parties, under Virginia laws in 1897, to operate the factories at Setauket, Long Island, and to deal in rubber goods generally, was not more successful. Suits brought against this corporation by parties in Setauket, to recover wages alleged to be due, in the New York Supreme court, were decided recently in favor of the plaintiffs.

CHANGES OF FACTORY SUPERINTENDENTS.

SUPERINTENDENT FREDERICK T. COMEE, of the Woonsocket Rubber Co., will devote his attention hereafter to that company's boot factory, at Millville, Massachusetts, with the assistance of his son, F. M. Comee. The company's "Alice" mill, at Woonsocket, will be in charge of John Robson, late superintendent of the Boston Rubber Shoe factory at Malden, who will be assisted by George Schlosser, who already held the position of assistant superintendent at the Alice mill.—The employés of the Alice mill, on the retirement of Superintendent Comee, united in purchasing a testimonial, in the shape of an elegant mahogany roll top desk, which he was pleasantly surprised to find at his home on returning from the factory on the evening of November 6.—Colonel F. L. Locke has been appointed superintendent of the factory at Malden, to succeed John Robson. He will be assisted by George W. Chase and John Williams.—Notice was given on November 6, at the factory of the L. Candee & Co. (New Haven, Conn.), of the resignation of Clarence G. Ames, who had been superintendent for about six years, or since Emmett A. Saunders left that position. The vacancy has been filled by the appointment of John H. Pearce, who has been assistant superintendent for several years. Mr. Ames will remain in another position.

A HOUSEWARMING AT EASTHAMPTON.

THERE was an enjoyable "housewarming" given at Easthampton, Mass., on the evening of November 15, by Mr. and Mrs. William Leonard Pitcher, in honor of Mr. Pitcher's parents, Mr. and Mrs. F. W. Pitcher, recently of Revere, but now returned to again become residents of Easthampton. The el-



F. W. PITCHER.

der Mr. Pitcher, who is general manager of the Easthampton Rubber Thread Co., recently purchased a large estate in that town, in a most desirable location, and the house has been so remodeled and refitted as to make it thoroughly modern. Though the house is large, one twice as large would not have been too spacious for the many friends who gathered at this

"housewarming" to welcome Mr. and Mrs. Pitcher on their return. There were also many guests from out of town, including not a few persons identified with the rubber trade. Among these were Mr. and Mrs. Henry C. Morse, Mr. and Mrs. William H. Gleason, Mr. and Mrs. E. S. Williams, Mr. and Mrs. E. B. Page, Mr. William J. Kelley, and Mr. Charles H. Arnold—all of Boston—and Mr. William H. Hillman, of New York. During the evening the guests were entertained with instrumental and vocal music. In one of the interludes an immense tin pitcher, called a "loving cup," was presented to the host and hostess. The "loving cup" was filled with little gifts of an amusing character. The host was informed that the "loving cup" was made with one handle, instead of three, because his friends wished to be hand in hand with the Pitchers. The latter part of the evening was spent in dancing.—On the following day a part of twenty were entertained at breakfast by Mr. and Mrs. Joseph W. Green, Jr.—"the next door neighbors." Mr. Green, who is the manager and treasurer of the Glendale Elastic Fabrics Co., has long been an intimate friend of the Pitchers, and his stepdaughter is the wife of Mr. W. L. Pitcher, who is associated with his father in the management of the Easthampton Rubber Thread Co.

RUBBER MEN IN A CREDIT ASSOCIATION.

REFERENCE was made in the last INDIA RUBBER WORLD to the active part taken by some members of the rubber trade in the work of the New York Credit Men's Association. A letter from an official of this body expresses its objects as follows: "We are striving to better the laws between debtor and creditor; we are punishing where we can those that commit a fraud on our members, and we are striving to improve the mercantile agency service, also. In our membership we have several representative rubber houses, but I think that if you should give us a notice in your paper, referring to what we are doing, it would help us in increasing the membership in the rubber trade." Among the 425 members are the United States Rubber Co., the Revere Rubber Co., the Hodgman Rubber Co., and the Stephen Ballard Rubber Co., besides several lead pencil

companies, who consume a considerable amount of rubber, viz.: American Lead Pencil Co., Eagle Pencil Co., A. W. Faber, and Eberhard Faber. A letter addressed to the association, No. 320 Broadway, New York, will secure printed matter pointing out more fully what are the objects of the association and what has been accomplished.

ADVANCE IN LEATHER BELTING.

THE fifteenth annual meeting of the Leather Belting Manufacturers' Association was held November 12 at the Astor House, in New York. A committee appointed to report on discounts and prices, presented a new list, raising prices 19 per cent., without change of discount, which was adopted by a vote of 26 to 2, three members declining to vote. The new prices took effect immediately. P. Jewell & Co. and the Detroit Belting Co. withdrew from the association on account of this action.

—New York *Shoe and Leather Reporter* says: "The prices of belting butts are higher now than they have been, except at one period, during the history of the trade. During the 'boom' of 1879 to 1881 they sold at 45 cents and 50 cents a pound. It is fair to state that hides were lower then than now. Oak belting butts, first quality, are selling now at 43 cents a pound. Last spring they sold at 36 cents. One year ago, November, 1900, the price was about the same, 36 cents, and in January, 1899, butts sold at 32 cents a pound. It is estimated that about 25,000 butts are cut weekly into belts. Our exports of belting are steadily increasing. Bark tanned leather for the transmission of power is favored in every part of the world."

Following is a comparison of list prices of leather belting in effect since November 12, 1901, and prices as fixed at the revision of November 15, 1899. The complete list is not given, but selections from it, ranging from 1 inch to 72 inches. The price is given per lineal foot, discounts being the same at both dates:

WIDTH.	NOV. 15, '99.	NOV. 12, '01.	WIDTH.	NOV. 15, '99.	NOV. 12, '01.
1 inch	\$0.14	\$0.17	15 inches	2.78	3.30
2 inches	.34	.41	20 "	3.70	4.40
3 "	.53	.64	25 "	4.63	5.50
4 "	.72	.87	30 "	5.55	6.60
5 "	.91	1.09	36 "	6.66	7.92
6 "	1.11	1.32	40 "	7.40	8.80
7 "	1.30	1.54	48 "	8.88	10.56
8 "	1.48	1.76	56 "	10.36	12.32
9 "	1.67	1.98	64 "	11.84	14.08
10 "	1.85	2.20	72 "	13.82	15.84

BETZLER & WILSON—A CORRECTION.

AN error occurred in a statement headed "Guarantee Rubber Co. (Akron, Ohio)," which appeared in the October issue of THE INDIA RUBBER WORLD [page 23]. The statement read: "This company succeeds the Betzler & Wilson Rubber Co. manufacturers of soft rubber specialties and also of the Betzler & Wilson fountain pens." As a matter of fact, the Betzler & Wilson Rubber Co. has not had anything to do with the firm of Betzler & Wilson, who continue to manufacture fountain pens at the old stand. Their pens have been improved so much as to make them second to none in quality. Consequently they are enjoying a fine trade and their up-to-date factory is as busy as ever.

FLAG RAISING AT THE APSLEY FACTORY.

THE Apsley Rubber Co. (Hudson, Mass.) have a new flag pole upon the factory grounds, 110 feet high, being the highest in that town. Work was stopped in the factory on the forenoon of November 6, that the employés might attend the flag raising ceremony, led by President L. D. Apsley, who made a patriotic address, in which he referred to the results of the political elections of the preceding day, in various parts of the country, as encouraging to the cause of public morality. The flag is of silk, 24×15 feet.

LOS ANGELES (CALIFORNIA) RUBBER CO.

THE business of this company was established some three years ago by the late J. W. Girvin, and since his death has been managed by B. J. Wheeler. It is the only rubber house in southern California. While making a specialty of rubber and leather belting, there is kept in stock a line of hose and packing, and rubber goods generally.

NEW INCORPORATIONS.

THE Connecticut Rubber Co. (Hartford), November 1, under Connecticut laws, to make and sell rubber goods; capital, \$10,000. The president and manager is John J. Ward, who is well known to the New England rubber trade, having traveled for the International A. and V. Tire Co., the Whitman & Barnes Manufacturing Co., and the Hartford Rubber Works Co. The secretary and treasurer, F. W. Starr, has been connected, for fourteen years, with the Pope Manufacturing Co., in various capacities, ranging from clerk to manager of a department. The company advise THE INDIA RUBBER WORLD that it is their intention to not only conduct a retail trade in rubber goods generally, but to enlarge their field by manufacturing and wholesaling. They already have been appointed agents for some leading rubber concerns, and have also secured some large contracts in manufacturers' supplies. The new corporation continues the business conducted since 1898 as The Connecticut Rubber Co., John J. Ward, proprietor.

=Southern Rubber Tire Co. (Knoxville, Tenn.), November 5, under Tennessee laws, to manufacture deal in vehicle tires, under a patent granted to William R. Giddeon; capital, \$50,000. Alexander McMillan, president; R. W. Williams, vice president; A. H. Martine, secretary and treasurer; W. R. Giddeon, managing director; John W. Green, attorney. A feature of this tire, which is solid and of the wired on variety,

is that it has a shallower steel channel than other tires. The ordinary channel conceals about one-third of the rubber, thus wasting that much of the material so far as resiliency is concerned. There is no danger, according to the inventor, of the rubber being thrown out of the comparatively flat channel, by reason of the fluted design of the channel (illustrated in sectional outline herewith). A contract has been awarded in New York for the manufacture of this tire.

=The Maynard Rubber Corporation (Hartford, Conn.), November 13, under Connecticut laws, to manufacture and deal in rubber goods; capital, \$5000. President, Edward W. Maynard, of Springfield, Mass. Secretary and treasurer, Justus D. Anderson, of Hartford.

TRADE NEWS NOTES.

THE Byfield Rubber Co. (Bristol, Rhode Island), early in November completed all the orders in hand for rubber footwear, at the same time working up all their raw material; paid off their help, and closed the factory indefinitely. It is believed in Byfield that the factory will not remain long closed, but the employés have been going to rubber factories elsewhere for work.

=The Fisk Rubber Co. (Chicopee Falls, Mass.) have established two more branches for the sale of their tires. One is in Boston, at No. 604 Atlantic avenue, and in charge of G. A. Campbell. The other is at No. 916 Arch street, Philadelphia, in charge of J. L. Gibney.

=The Firestone Tire and Rubber Co. (Akron, Ohio) are reported to be contemplating the establishment of a rubber factory of their own.



=The American Wringer Co. obtained a gold medal for their exhibit of "Horseshoe brand" clothes wringers at the Pan American exhibition.

=The tires of the Kelly-Springfield Rubber Tire Co. (Davenport, Iowa) are manufactured by the International Automobile and Vehicle Tire Co., at Newton Upper Falls, Mass.

=The rubber jobbing firm of Towner & Co. (Memphis, Tennessee) have favored THE INDIA RUBBER WORLD with a copy of a handsomely illustrated souvenir volume, "Memphis Illustrated," intended to represent the appearance and the business conditions of that city. A page of the book is devoted to the live Towner firm.

=The Whitman and Barnes Manufacturing Co. (Akron, Ohio) recently added to their rubber department a belting plant, at a cost of \$75,000. The company's rubber business made a splendid showing at the late annual meeting of the stockholders, and it is understood that in the near future there will be further extensions in this department, to take the place to some extent of the company's production of mower and reaper knives and wrenches, which will be transferred from the Akron factories to the factories at West Pullman.

=The Calumet Tire Rubber Co. (Chicago) have added to their line of products the "Calumet" horseshoe pad, a patented article, which is reported to be light, efficient, and cheap.

=The Consolidated Rubber Tire Co. (New York) distributed as a souvenir, at the recent carriage shows, a good pocket map of the Philippine islands, in connection with not a little commercial and historical matter of interest, relating to the islands.

=The Boston Belting Co. have favored THE INDIA RUBBER WORLD with a handsome lithograph in colors, embracing a view of their extensive factories in Boston, and also scenes on the upper Amazon, representing the first steps in the production of "Pará rubber." The lithograph comes tastefully framed, size 21×24½ inches, and no doubt copies of it will be found hereafter ornamenting the offices of the Belting company's many customers.

=Otto Meyer, No. 161 Summer street, Boston, who for several years past has been connected with the crude rubber trade, will hereafter transact business in his own name and for his own account. He has made arrangements whereby he will be the representative in New England of A. T. Morse & Co., of New York.

=The Chesapeake Rubber Co. (Baltimore, Maryland) are doing a big business in rain coats, which they are manufacturing and selling in all parts of the country.

=Jenkins Brothers, whose business embraces the Jenkins Rubber Co. (Elizabeth, New Jersey), advise THE INDIA RUBBER WORLD that they have received the following awards at the Pan American Exposition for their goods: Gold medal each for Jenkins Brothers valves and Jenkins '96 packing; two silver medals for rubber specialties.

=Morgan & Wright (Chicago), who made an attractive exhibit of tires at the recent carriage shows, distributed to their friends a souvenir in the shape of a handsome desk calendar designed for perpetual use.

=From Rochester, New Hampshire, comes a report that the president of a large rubber factory in Rhode Island has been visiting that town, with a view to removing his mill there. It is said to employ over 400 hands the year round.

=On November 15 fire broke out in one of the floors occupied by the Co-operative Rubber Co., manufacturers of mackintoshes, in a building at the corner Hanover and North Centre streets, Boston, causing a loss of several thousand dollars, part of which fell upon other tenants in the building.

= Benning & Barsalou, auctioneers, of Montreal, on October 24 held their thirty-fourth annual sale for account of the Canadian Rubber Co., of rubber boots and shoes. Over 6000 cases were disposed of, for nearly \$100,000. There were more than 300 buyers present, and prices averaged from 10 to 20 per cent. higher than at the sale last year.

= The Canadian General Electric Co., Limited (Toronto), publish a folder with illustrations of what they describe as the largest shipment of electrical apparatus ever made in Canada. A view is shown of a railway freight train, of 21 cars, carrying 646,650 pounds of material consigned to the Chambly Manufacturing Co., to be installed in their power house at Richelieu, Quebec, supplying current to the Royal Electric Co., for the city of Montreal.

= Thirty shares of the Singer Manufacturing Co., \$100 par, were sold recently at auction in New York at \$285.50 each.

= The B. F. Goodrich Co. (Akron, Ohio) issued in limited numbers last winter a souvenir picture which attracted wide attention. The supply was quickly exhausted but the demand for the reproductions of the painting, a portrait by Asti, of New York, has been such that Akron art dealers have offered fancy prices for copies of the lithos.

= A. T. Saunders, an artist, of Akron, Ohio, is the inventor of a golf ball of which much is expected. Some who have tried it say it will rival the Haskell ball, the demand for which has been almost beyond the supply this year, notwithstanding that it is probably the highest priced ball on the market. It has not been decided where or by whom the Saunders ball will be made.

= The Safety Insulated Wire and Cable Co. (New York) have been awarded a gold medal at the Pan American Exposition for their display of electric wires and cables.

= The American Tool and Machine Co., whose advertisement on another page is familiar to INDIA RUBBER WORLD readers, received a gold medal at the Pan American Exposition for an exhibit of centrifugal machinery.

= H. O. Canfield (Bridgeport, Connecticut) has acquired a piece of ground, fronting 500 feet on Staples street and 200 feet on Wood avenue, on which it is understood that he intends erecting buildings for the extension of his rubber factory, the capacity of which for some time past has been inadequate for the growth of the business.

= Hugh McCaugherty, an employé of the Gutta Percha and Rubber Manufacturing Co. of Toronto, Limited, while at work at a calendar, met with a serious accident, and sued the company for \$10,000 damages and \$2000 for doctor's bills, etc., alleging negligence on the part of the company. The case was tried September 30, resulting in a verdict for \$2000 for the plaintiff.

= Proceedings have been brought, in the Chicago courts, to enforce the payment of a judgment entered in the English chancery high court of justice, against the Gormully & Jeffery Manufacturing Co., in favor of the North British Rubber Co. and William Erskine Bartlett, for infringement in England of the "Clincher" tire patent.

= J. C. Pierrez, of New York, who will be manager of the People's Hard Rubber Co., of Akron, Ohio, was lately in the latter town, where he stated that the company expected to have their factory in operation by the beginning of the new year.

= A fire alarm was sounded from the factory of the Canton Rubber Co. (Canton, Ohio) on the afternoon of October 30. The solution in the trough of a spreading machine had caught fire, but the flames were extinguished before much damage was done.

= The Alden Rubber Co. (Barberton, Ohio) believe in making the surroundings of their factory attractive. Ornamental vines have been set out which, by another summer, are expected to cover almost all the outer wall. The buildings overlook Lake Anna, and, thanks to a well kept lawn, and two fountains, the appearance at a short distance is that of some well cared for public institution.

= The Canadian Rubber Co. of Montreal have moved their offices from their long established address, No. 333 St. Paul street, to the corner of Papineau avenue and Notre Dame street.

= Manufacturers of golf balls say that sales this year have been the largest in the history of golf in America.

= A fire in the waterproofing department of the Canadian Rubber Co. of Montreal, on the evening of November 1, caused a loss reported at \$5000, which is covered by insurance. The fire occurred in the third story of No. 983 Notre Dame street, and was prevented by the firemen from spreading to the lower floors.

= At a recent auction sale of securities in New York 125 shares of The Celluloid Co. (\$100 par) brought 102 $\frac{1}{4}$ to 103.

= Progress and prosperity are evidenced in the extended accommodations which the Manufacturers' Advertising Bureau will occupy after November 1, at its old time location, No. 126 Liberty street, New York. The new offices give increased facilities, which have become necessary by the continued growth of the business done by the Bureau since its establishment in 1877. The methods of the Manufacturers' Advertising Bureau have received the endorsement of the technical press, and many representative manufacturing concerns of this country and Europe, some of which have been its clients for twenty years. Mr. Benj. R. Western, the originator and proprietor, was the pioneer in the management of a firm's newspaper work and advertising in what are generally termed the "trade journals" as a business by itself, and is a recognized authority in his special field.

= The estate of the late Samuel K. Wilson, of Trenton, New Jersey, an extensive woolen manufacturer who had many outside interests, including at one time a rubber factory—seems likely to be settled in the courts. Mr. Wilson was supposed to be very wealthy, and his will contained many bequests to charitable and benevolent institutions, but it is reported that, on account of a shrinkage in values of some of his property, the estate will not suffice to pay the debts charged against it.

= The duty on imports of rubber boots and shoes into the Australian commonwealth, under the rates which became effective on October 9, is 25 per cent. *ad valorem*.

= In the New Jersey court of chancery a decree has been entered dismissing the application of Frank A. Magowan and his brother-in-law, Dr. Robert H. Winn, of Canada, to be made parties to the suit in which 1048 shares of the old Empire Rubber Co. (Trenton) are involved. For several months they have been fighting for an equity in this stock, now in the name of General William H. Skirm, whose affairs are in litigation. It is stated that this action of the court is due to Mr. Magowan's refusal to produce testimony in substantiation of the claim, and that if Magowan and Winn come within the jurisdiction of the court, they may be arrested for contempt.

= The building erected for the Groton Rubber Co. (Poquonock Bridge, Connecticut), which failed before getting to work, has been purchased by Nelson Morgan, from the parties who held possession under a lien for lumber furnished.

= Gustave Kush, manufacturer of mechanical rubber specialties, late of No. 63 Gold street, New York, has removed to larger quarters, No. 60 Beekman street.

=The Hood Rubber Co. (East Watertown, Mass.) are reported to have made 26,400 pairs of rubber shoes during one day in November.

=The output of rubber boots at the Millville factory of the Woonsocket Rubber Co., about the middle of the month, was increased to 7000 pairs per day.

=Whitall, Tatum & Co. (New York), long established in the druggists' sundries trade, in connection with which they have been large handlers of rubber goods, in the home market and for export, have become incorporated as the Whitall-Tatum Co. The business of the house will be continued on the same lines as in the past.

THE MARKET FOR RUBBER SECURITIES.

THE transactions in shares of the United States Rubber Co. on the New York Stock Exchange since our last report have been:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Oct. 26	210	15½	15½	700	50	50
Week ending Nov. 2	800	15	14½	210	48½	48
Week ending Nov. 9	1,000	15½	15	220	48	48
Week ending Nov. 16	1,685	15½	15	900	50	49
Week ending Nov. 23	1100	15%	15%	232	52	51

RUBBER GOODS MANUFACTURING CO.

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Oct. 26	13,100	29½	27½	—	—	—
Week ending Nov. 2	8,510	28½	27	100	75	75
Week ending Nov. 9	1,000	28	26½	—	—	—
Week ending Nov. 16	4,150	26½	25	200	100	104½
Week ending Nov. 23	—	—	—	—	—	—

WOONSOCKET RUBBER CO.

THE South Main street property, including the original plant operated by the Woonsocket company, has been offered for sale by the United States Rubber Co. It is taxed as real estate on an assessment of \$118,700, and the knit boot plant now on the property is assessed at \$40,000 as personal property. The knit boot plant, as already reported in this journal, is to be removed to Millville, Massachusetts, and combined with the Lawrence Felting Works, under the superintendence of Robert J. Bowes, son of the late William J. Bowes, who had charge of the Lawrence mill. George C. Wetmore, general manager, and Thomas Skipper, superintendent of the knit boot factory at Woonsocket, retire from the service of the United States Rubber Co. with the closing of that mill.

CONSOLIDATION AT MILFORD.

THE Union Rubber Co. (Boston), manufacturers of mackintoshes, will remove about January 1 to Milford, Massachusetts, where they have purchased for cash factory No. 1 of the Milford Shoe Co., known also as the Shippee factory. The Milford Rubber Co., proofers of cloth, will be consolidated with the Union Rubber Co., and extensive improvements will be made in the building just bought, to accommodate the consolidated businesses.—Manager C. B. Archer, of the Milford Rubber Co., had previously advised THE INDIA RUBBER WORLD: "As our business has outgrown our present quarters, we are contemplating a change. We expect to more than double our present capacity of 10,000 yards a day, with the very latest type of machinery to be had. Our present equipment is of the very best, but we must have more of it."—The Union Rubber Co. is a comparatively new concern, composed of Leon

Aronson (president), Joseph Aronson, and a Mr. Goddard, and they have been notably successful thus far.

GOLD MEDAL FOR INTERLOCKING TILING.

THOSE of our readers who visited the Pan American Exposition can hardly have failed to see the exceptionally attractive display made by The New York Belting and Packing Co., Limited, a prominent feature of which was the interlocking rubber floor tiling made by this firm. A gold medal has been awarded by the judges of the exposition, for the display of tiling, which is thus shown to have been superior to any other article in this class exhibited at Buffalo. In addition the company received another gold medal and a silver medal for their exhibit at Buffalo.

THE MAHONING'S CHANGE OF NAME.

THE Mahoning Rubber Manufacturing Co. (Youngstown, Ohio) have changed their name, and will be known as the Union Rubber Co. The former name was considered too long, besides which "Mahonning" was too local, having no significance outside of Youngstown and its vicinity.

NORTH-WESTERN RUBBER CO.

THE newspapers of the Akron, Ohio, district are beginning to discuss the North-Western Rubber Co., Limited, the incorporation of which, under West Virginia laws, was reported in THE INDIA RUBBER WORLD of June 1, 1901, as an enterprise in which Akron capital is interested. The factory of this company, as already stated, is being erected near Liverpool. When Mr. O. C. Barber, of Akron—one of the largest stockholders of the Diamond Rubber Co.—sailed recently for an absence of several weeks in Europe, he declined to be interviewed by his home newspapers with regard to a report that he was going abroad on business connected with the new factory.

MR. JENKINS MAKES A CHANGE.

SILAS H. JENKINS, who is one of the best known salesmen of mackintosh goods in the United States, left for England on November 30 on the *Campania*, to buy goods for Rosenwald & Weil, of Chicago, as he has taken charge of their rain coat department. Mr. Jenkins will visit London, Paris and Berlin in the search for new and beautiful styles of spring goods. It is interesting to note in this connection how long Mr. Jenkins has been in the rubber business. In 1885 he connected himself with the Hodgman Rubber Co., travelling in the south and west from Chicago. During the last five years he has been resident manager of the New York department of the Stoughton Rubber Co. In writing THE INDIA RUBBER WORLD, Mr. Jenkins expresses his regret at leaving the rubber business after seventeen years of service. As the rain coat is considered really a mackintosh to-day, however, he can hardly be said to be out of the business, and he certainly will carry with him the good wishes of his large acquaintance.

PERSONAL MENTION.

THE retirement of Mr. H. C. Corson as vice president of The B. F. Goodrich Co. (Akron, Ohio), announced several months ago in THE INDIA RUBBER WORLD, will take effect on January 1 next. There is reported to be much speculation in Akron as to who will be his successor. Mr. Corson will retire from active business in the belief that he has made a sufficient fortune, and that he has earned a rest. The newspapers of his section have commented on the unusual fact—in America—of a man retiring voluntarily from business while still at the height of success.

=The Hon. E. S. Converse, president of the Boston Rubber Shoe Co., has contributed \$5000 toward a fund which is being raised to cancel the debt on the Young Men's Christian Association at Malden, Mass.

MR. J. O. STOKES AND OTHERS INTERVIEWED.

REALIZING that the rubber trade at large, are exceedingly interested in the new rubber shoe project, of which Mr. Joseph O. Stokes is the visible head and front, THE INDIA RUBBER WORLD secured a brief interview with him. Mr. Stokes said in substance :

"I have but little to add to the news article which you printed last month. Prior to that time, my associates and myself had been developing our project quietly and carefully, perfecting the machines and the processes, and securing patents that should protect us in every possible way. Now that that is accomplished, I am perfectly willing to give you our plans as fast as they are matured. For example, they are nearly completed for the most practical up-to-date rubber factory that can be built. The location is already decided upon, and is ideal with regard to help, water, shipping facilities, and the like. The steam and power plant will be equal to anything ever installed. The washers and mixers will be run in the usual manner, but the calenders will be operated by separate motors, so that we may have the advantage of variable speeds. The ticket at the start will be 20,000 pairs a day, but we shall build so that we can increase to 100,000 pairs, which, under the new process, is perfectly feasible. An order for 300 of our machines for this plant is already booked."

"With regard to your question as to leasing to other manufacturers, I have that matter in mind and shall take it up as soon as may be. Everything in connection with this business is to be done on a broad and liberal basis, and, while we shall safeguard our own rights and interests most jealously, we shall not ignore the interests of others."

"I have received interesting communications from manufacturers all over the United States, both in and out of the rubber shoe trade, each of which will have careful attention at an early date. I have no objection at all to keeping THE INDIA RUBBER WORLD informed of our progress from time to time, but matters are now moving so rapidly that your paper should be a daily to keep track of us."

"In this connection it is interesting to note the views of leading rubber shoe men, who have already seen the new product. Said one : "This is the only time in my life that I have known the word 'revolution' to really fit the case. It is an absolute revolution."

Said another : "It is interesting, very interesting, but as far as I can see there will be no *finesse* in this method of manufacture; that is, some parts of the shoe will call for expensive stock, others call for cheap stock, and so on. I do not see how this new shoe can accommodate itself to this need."

Still another—an exceedingly wealthy owner in a large corporation : "I have not seen the shoe, but my associates say that it cannot be lined by machinery, and we are not in the least concerned about it."

One whose company have not the fear of the Lord before their eyes said : "Our Mr. ——— told me that if the machine and process were very good, we should appropriate them, and that it would take years to settle the matter in court."

Another said : "If it has come I am glad of it, particularly if it is true that we shall be allowed to investigate with an idea of leasing. If one-half claimed for the new method can be substantiated, I stand ready to sign leases just as soon as they can be drawn up."

A PETITION of involuntary bankruptcy has been filed against F. N. Woodward & Co., rubber manufacturers, of East Water-town, Mass., by their creditors, taking precedence over the firm's application for a receiver.

"CRUDE RUBBER CONTRACTS."

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have read with much interest the article on "Crude Rubber Contracts," in your November issue, and find several items open to some criticism, though nothing of special importance, except under heading VIII—paragraphs 2 and 3, relating to over deliveries and under deliveries, where the differences allowed are, in my opinion, too liberal.

With regard to a purchaser going into the market and buying rubber to make up a shortage (and also a non-delivery), treated under heading IX of the article referred to, the custom in the rubber trade is for the buyer to be rather easy with the seller. Usually, where a delivery is not made exactly in the time specified in the contract, the buyer is willing to wait a reasonable time for the seller to deliver, though of course he has the legal right to demand delivery in the time specified, and, failing to get the rubber, to notify the seller that he will buy it in the market, if obtainable, and charge him the difference, if any. But my experience has been that this is rarely done, and in some cases where the seller has not been able to get the goods to make good his deliveries, I have known of cash settlements being made.

New York, Nov. 22, 1901.

A BROKER.

THE RUBBER VINE OF HONDURAS.

FURTHER information regarding "A new rubber from Honduras," mentioned in THE INDIA RUBBER WORLD for November [page 40] has been supplied by Messrs. Eggers & Heinlein, the New York importers who submitted the sample of rubber in question. The firm have received from their correspondents in Honduras a letter reading in part as follows :

"We have further information about the new rubber plant, and beg to advise you that the same Mr. Floriano Davadie who is mentioned in THE INDIA RUBBER WORLD of May 1, 1901, [page 234] forwarded us the samples which we had the pleasure of sending you. It seems that the plant must be cut off in order to get out the rubber, but there are large mountains covered with this wild vine, so that large quantities might be obtained. The sticks sent you were from a plant of four or five years growth, at which age rubber may be obtained. The plant is killed, or at best will stand only a second bleeding, instead of yielding for a number of years, as in the case of the rubber tree. It is still unknown how this vine may be used in the best way to produce rubber."

The Mr. Davadie mentioned above is the governor of the district of Yoro, in Honduras, and member of a company organized last spring to exploit rubber.

IN the August INDIA RUBBER WORLD was reported the indictment of John J. Scannell, fire commissioner of New York city, and of William L. Marks, who is alleged to have enjoyed special advantages as an "agent" for the sale of fire hose and other supplies to the fire department, for defrauding the city in the matter of contracts for such supplies. On September 30 Justice Gildersleeve dismissed the indictments on a technicality, on the ground that a lawyer retained as special counsel retained by the public prosecutor was illegally in the grand jury room while the cases were being considered. Justice Gildersleeve gave permission to the district attorney to resubmit the case to the grand jury. This was done, and on November 22 new indictments were found, and the cases had been called for trial in one of the New York courts, when this paper was closed for the press.

REVIEW OF THE CRUDE RUBBER MARKET.

PARÁ sorts, after having declined from the figures quoted one month ago, until within the past ten days, have shown an upward tendency, until the level of November 1 has about been reached again. The market for some days has been very firm, in spite of continued liberal arrivals at the mouth of the Amazon, owing to the pressure to buy. Prices are stiffening at Pará, where quotations have been higher, relatively, than in the consuming markets. Thus far the receipts at Pará, for the crop year, exceed those of last year for the same months by about 2400 tons. It will be remembered that up to December 1, 1900, the receipts for the season were behind those of the preceding year, though there was an improvement later, resulting in slightly larger receipts than were ever known before. This year there are not wanting predictions that, in spite of the heavy early arrivals, the total for the year will be smaller than last year, on account of a decline yet to be experienced. This, however, remains to be seen. It is true that, for months past, a reduced output from the Upriver districts has been predicted, and so far the principal arrivals at Pará have been from the lower districts. It will be a month or so yet before it can be determined what the Upriver production may be. The arrivals of all sorts in the United States have been much larger since January 1 than during the corresponding period last year. This increase has been offset by the lessened total of net rubber imports in the United Kingdom and Germany. The English rubber industry has long since ceased to expand, and the industry in Germany has not been growing of late at the notable rate which was exhibited during three or four years past. Meanwhile the combined production of rubber other than Pará sorts—while some African districts show a decline—continues for the present to grow, and if the Pará output should not decline before the end of this crop season, it would seem that there will be rubber in plenty for all who want it.

New York quotations on November 29 were:

PARÁ.

	AFRICAN.
Islands, fine, new....	70 @80
Islands, fine, old....	81 @82
Upriver, fine, new....	84 @85
Upriver, fine, old....	87 @88
Islands, coarse, new....	47 @48
Islands, coarse, old....	@
Upriver, coarse, new....	64 @65
Upriver, coarse, old....	67 @68
Caucho (Peruvian) sheet	50 @51
Caucho (Peruvian) ball	56 @57
CENTRALS.	
Esmeralda, sausage....	54 @55
Guayaquil, strip....	50 @51
Nicaragua, scrap....	54 @55
Mangabeira, sheet....	40 @41
EAST INDIAN.	
Tongues.....	45 @46
Sierra Leone, 1st quality	63 @64
Benguela.....	49 @50
Cameroun ball.....	45 @46
Fiake and lumps.....	32 @34
Accra flakes.....	17 @18
Accra buttons.....	48 @49
Accra strips.....	54 @55
Lagos buttons.....	46 @47
Lagos strips.....	52 @53
Madagascar, pinky....	63 @64
Madagascar, black....	@

Late Pará cables quote:

	Per Kilo.	Per Kilo.	
Islands, fine.	\$4850	Upriver, fine.	\$4800
Islands, coarse.	18950	Upriver, coarse.	4800
Manaos advices, same date:			
Upriver, fine.	58000	Upriver, coarse.	38600
Exchange 11½ d.			

NEW YORK RUBBER PRICES FOR OCTOBER (NEW RUBBER.)

	1901.	1900.	1899.
Upriver, fine.	84 @90	93 @100	103 @105
Upriver, coarse.	63½ @66	69 @74	81 @84
Islands, fine.	78 @85	92 @100	97 @99
Islands, coarse.	46½ @48	52 @57	61½ @64
Cametá, coarse.	48 @49	56 @58	63 @65

IN regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 58 William street, New York), advises us as follows:

"During November the market for commercial paper has continued just about the same as in October; city banks doing but little, and the demand being fair from out of town ones at 5% per cent. for the best rubber names and 5% @ 6 per cent for the smaller or less known concerns."

Statistics of Para Rubber (Excluding Caicho).

	NEW YORK.			ENGLAND.		
	Fine and Medium.	Coarse.	Total 1901.	Total 1900.	Total 1899.	
Stocks, September 30...tons	449	37 =	486	450	337	
Arrivals, October.....	777	455 =	1232	1195	1126	
Aggregating.....	1226	492 =	1718	1645	1463	
Deliveries, October.....	917	456 =	1373	1066	1233	
Stocks, October 31....	309	36 =	345	579	230	
PARÁ.						
	1901.	1900.	1899.	1901.	1900.	1899.
Stocks, September 30....	250	255	695	1025	1200	670
Arrivals, October.....	2574	2235	2256	630	180	450
Aggregating.....	2824	2490	2951	1655	1380	1120
Deliveries, October....	2449	2075	2414	775	450	625
Stocks, Oct. 31....	375	415	537	880	930	495
World's supply, October 31.....						
	2960	3313	2238			
Pará receipts, July 1 to October 30.....	6682	5419	5895			
Pará receipts of Caicho, same dates.....	443	5419	5895			
Afloat from Pará to United States, Oct. 31....	280	429	376			
Afloat from Pará to Europe, October 31....	1080	649	663			

Para.

KANTHACK & CO. report [November 14]: "With the continuance of good demand almost all arrivals were readily disposed of, but not without sellers being compelled to make some concessions, in consequence of a fresh decline at the consuming markets. Supplies consist of about 940 tons Islands and Pará kinds, and 140 tons Upriver rubber, including a little Caicho. The crop is coming in rapidly, but the receipts cannot be expected to increase in the same proportion during the coming months, and it is likely the present excess of 1990 tons over last year's receipts will receive a check before long. The price difference between fine and coarse rubber has been reduced to \$2500 on Islands and \$1800 on Upriver kinds, the allowance between fine and medium remaining at 800 reis on all descriptions. The present quotations are:

Pará fine.....	69 cents against 82½ cents.)	Same time last year, per pound f. o. b., not including shrinkage, freight, and insurance.
Pará coarse.....	34½ "	33½ "
Upriver fine.....	81 "	91 "
Upriver coarse....	55 "	52½ "
Caicho slats....	42 "	42 "
Caicho balls....	52 "	53½ "

"Receipts in October amounted to 2640 tons, against 2360 tons corresponding time in 1900, raising the total for the present crop season, since July 1, to 7135 tons against 5780 tons last year, and 5,890 tons in 1899. At the present date the figures are 8580 tons against 6590 tons in 1900 and 7080 tons in 1899. Exports have been:

During July	125 tons to America ; 935 to Europe.
During August.....	562 tons to America ; 745 to Europe.
During September.....	855 tons to America ; 1038 to Europe.
During October.....	1165 tons to America ; 1345 to Europe.
So far in November	1123 tons to America ; 573 to Europe.

"Exchange, although fluctuating, frequently, has kept within the range of 11½d. and 12½d., the rate closing firm at 12d. at 90 days sight on London."

Hamburg.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The market during the past week showed no material change, a quiet and waiting tendency prevailing along the whole line. Transactions moved within narrow bounds, which seem to have become the order of the day. But little inclination to buy was shown for fine Pará, hard cure, and fine Bolivian, spot, and small lots were taken out of the market at secret prices. Bolivian negroheads, for delivery, found ready buyers at 5.85 marks per kilogram. Mollendo was held at such high prices that no transactions took place. For the better middle sorts, and for fine to good Mozambique ball high prices were paid. Spindles and Massai received good attention. It is intended to clean out old stocks in several sorts and firm bids ought to receive good bargains. The sales were at the following prices in marks per kilogram :

Mozambique ball, finest, red.....	7.30
Mozambique ball, fine, red.....	7.00
Mozambique ball, fine, mixed.....	6.25@6.50
Mozambique ball, good.....	6.00
Mozambique ball, inferior.....	5.30@5.50
Batanga ball, genuine.....	4.05@4.10
Massai niggers, prime, red.....	6.00@6.10
Mozambique spindles.....	6.00@6.10
Ecuador scrap, fine.....	5.40@5.50
Guatemala sheet, fine.....	4.10

Hamburg, November 12, 1901.

United States Crude Rubber Imports.

[JANUARY 1 TO SEPTEMBER 30.]

FROM—	1899.	1900.	1901.
United Kingdom..... pounds	7,629,796	5,759,909	4,863,693
Germany.....	1,443,797	1,114,784	1,340,184
Other Europe.....	5,347,549	4,421,517	6,781,870
Central America.....	1,086,059	1,061,813	976,207
Mexico.....	295,347	284,975	222,088
West Indies.....	4,346	10,097	31,434
Brazil.....	21,798,955	20,430,081	24,927,390
Other South America.....	1,505,002	799,313	1,000,183
East Indies.....	765,761	569,436	315,273
Africa.....	4,106	.....	.....
Other countries.....	43,204	41,412	22,778
Total India-rubber.....	39,986,921	34,493,337	40,481,040
Gutta-percha.....	410,097	282,093	267,876
Total.....	40,397,018	34,775,430	40,748,916
Value of Rubber.....	\$24,854,785	\$21,449,246	\$20,869,070
Average per Pound.....	61.5 cents.	62.2 cents.	51.2 cents.

British Imports of India-Rubber.

[JANUARY 1 TO OCTOBER 31.]

	1899.	1900.	1901.
Imports..... pounds	41,969,200	49,291,648	42,992,768
Exports.....	28,359,968	28,022,176	27,125,280
Net imports.....	13,609,232	21,268,472	15,867,488
GUTTA PERCHA.			
Imports..... pounds.	7,197,792	12,632,480	8,261,680
Exports.....	615,552	1,219,120	1,055,600
Net imports.....	6,582,240	11,413,360	7,206,080

Java Rubber.

EXPORTS of rubber from Java (including Madura) amounted in 1897 to 59,840 pounds; in 1898 to 67,728 pounds; in 1899 to 78,880 pounds; and in 1900 to 213,112 pounds.

Bordeaux.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Arrivals of Caoutchouc since our last report have been :

OCT. 15.—Via Marseilles :				
Grand Bassam.....	.....	.....	.....	.....
Soudan twists.....	.....	.....	.....	.....
Nov. 1.—Via Antwerp :				
Grand Bassam.....	.....	.....	.....	.....
Nov. 6.—By the Rio Negro :				
Cassamance.....	.....	.....	.....	.....
Conakry.....	.....	.....	.....	.....
Soudan.....	.....	.....	.....	.....
Nov. 8.—By the St. Joseph :				
Soudan.....	.....	.....	.....	.....
Nov. 15.—By the Rickelieu :				
Cassamance.....	.....	.....	.....	.....
Soudan.....	.....	.....	.....	.....
Cassamance sorts :				
Twists, nice, brown. 6.95@7.	D.....			
Twists, white.....	6.80	Grand Bassam :	1.70	
Twists, middle.....	6.60	Lump	4.70	
Twists, ordinary..... 6.25@6.50	Biscuits	5.10		
Niggers, red.....	7.50	Niggers.....	5.70	
Niggers, ordinary..... 6.	Madagascar :			
Niggers, clayey..... 4.50@5.	Majunga.....	4.50@5.		
Cassamance sorts :		Tamatave.....	5.	
A. P.....	6.80	Niggers, middle..... 5.50@5.60		
A.....	5.35	Niggers, clayey..... 3.70@4.		
A. M.....	4.60	Tonkin, red..... 5.75@6.		
B.....	3.60	Tonkin, black..... 6.50		
D. C.	3.	New Caledonia..... 8.15		

P. CHAUMEL.

Bordeaux, November 14, 1901.

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The sale of rubber which took place October 31 had a satisfactory result, in spite of the lower quotations for Pará sorts in the English markets. About the whole quantity was sold, viz.: 427 out of 445 tons. Prices show little change on brokers' valuations; that is, there has been no change since the September sale. An advance of 25 to 50 centimes was paid for 41 tons of Aruwimi, and for 42 tons Uélé strips (Upper Congo). Other sorts maintained their prices. Actual stocks, 285 tons, besides the fresh arrivals per the steamer *Albertville*, from the Congo, of about 350 tons.

C. SCHMID & CO.

ANTWERP RUBBER STATISTICS FOR OCTOBER.

DETAILS.	1901.	1900.	1899.	1898.	1897.
Stock, Sept. 30. Kilos	896,143	1,004,762	307,482	226,874	257,349
Arrivals October....	234,635	470,028	304,936	166,467	165,384
Congo sorts.....	191,728	43,917	166,821	142,086	159,637
Other sorts.....	43,457	38,111	138,125	84,381	5,747
Aggregating...	1,130,778	1,474,790	612,426	393,341	422,733
Sales October.....	864,673	565,743	463,690	158,690	148,383
Stocks, Oct. 31.	266,105	904,047	148,738	234,651	274,410
Arrivals since Jan. 1...	4,960,761	5,054,496	2,933,333	1,581,946	1,481,169
Congo sorts.....	4,574,034	4,298,062	2,491,590	1,347,757	1,377,984
Other sorts	386,727	756,434	441,743	234,189	103,185
Sales since Jan. 1...	5,308,605	4,437,440	3,047,935	1,441,758	1,346,387

ARRIVALS AT ANTWERP.

NOVEMBER 4.—By the *Albertville*, from the Congo:

Bunge & Co. (Domaine privé Etat du Congo).... kilos.	207,000
Bunge & Co. (Société Anversoise).....	7,858
Bunge & Co. (Comité Spécial Katanga)	440

Bunge & Co. (Société Isanghi).....	10,312
Société A B I R.....	88,000
Ch. Dethier (Société Belgika).....	1,000
Comptoir Commercial Congolais.....	11,600
Crédit Commercial Congolais (La Lulanga).....	2,954
M. S. Cols (Société Equatoriale Congolaise).....	4,874
M. S. Cols (Produits Vegetaux du Kassai).....	10,000
M. S. Cols. (Société Lubefu).....	1,500
M. S. Cols (Société Ikelumba).....	1,063
Société Coloniale Anversoise (Belge du Haut Congo).....	10,000
Soc. Coloniale Anversoise (Cie. des Mag. Generaux).....	1,000
W. Mallinckrodt & Co. (Alimaienne).....	10,000
	367,601

[Arrivals by same steamer, November 6, 1900—136,550 kilograms.]

London.

JACKSON & TILL, under date of November 1, report stocks:

	1901.	1900.	1899.
LONDON { Pará sorts.....	tons	—	—
Borneo.....	137	209	166
Assam and Rangoon.....	77	32	33
Other sorts.....	477	690	406
Total.....	691	931	605
LIVERPOOL { Pará.....	876	927	490
Other sorts.....	1035	1182	765
Total, United Kingdom.....	2602	3040	1860
Total, October 1.....	2802	2846	1831
Total, September 1.....	2736	3170	1988
Total, August 1.....	2944	3645	1878
Total, July 1.....	3128	3653	2247
Total, June 1.....	3502	3624	2510
Total, May 1.....	3397	3952	2129

PRICES PAID DURING OCTOBER.

	1901.	1900.	1899.
Pará fine.....	3/4½ @3/7½	3/11½ @4/2½	{ a 4/2 @4/3 b 4/4 @4/5
Negroheads, Islands.....	No sales.	2/3	2/3½
Do scrappy.....	2/8	2/11 @3/1	3/5 @3/5½
Bolivian.....	c. 3/7 @3/8	No sales.	4/4½ @4/5
(a) Islands. (b) Hard. (c) Old.			

Liverpool.

WILLIAM WRIGHT & CO. report [November 1]: "Fine Pará."—There has been a fair demand both spot and forward, but with a continued liberal supply of receipts, prices have declined, especially for Islands grades. The demand of the other side [United States] continues strong and active, especially for Upriver, and prices there are still considerably above those

PARA RUBBER VIA EUROPE.

OCT. 25.—By the *Germanic*=Liverpool:
Reimers & Co. (Fine and Medium)..... 22,500
Reimers & Co. (Coarse)..... 9,000 31,500

OCT. 26.—By the *Campania*=Liverpool:
Reimers & Co. (Fine)..... 28,000
Reimers & Co. (Coarse)..... 2,500
George A. Alden & Co. (Fine)..... 5,700
Crude Rubber Co. (Fine)..... 5,500 41,700

Nov. 1.—By the *Majestic*=Liverpool:

George A. Alden & Co. (Fine)..... 9,700
Crude Rubber Co. (Fine)..... 9,700
Reimers & Co. (Fine)..... 4,500 23,900

Nov. 6.—By the *Oceanic*=Liverpool:

Reimers & Co. (Fine)..... 14,400
George A. Alden & Co. (Fine)..... 11,300
Crude Rubber Co. (Fine)..... 11,200
Kramisch & Co. (Coarse)..... 4,500 41,400

Nov. 9.—By the *Lucania*=Liverpool:

Reimers & Co. (Fine)..... 43,000

Nov. 22.—By the *Germanic*=Liverpool:

Reimers & Co. (Cauchy)..... 4,500
Ideal Rubber Co. (Fine)..... 2,200 6,700

OTHER ARRIVALS AT NEW YORK

CENTRALS.
POUNDS.

OCT. 25.—By *El Monte*=New Orleans:
A. T. Morse & Co..... 12,000
Eggers & Heinlein..... 1,000 13,000

ruling here. Our own opinion is that rates for spot and near at hand are being depressed with a view to buying further ahead. This is, we think, borne out by the fact that while there are sellers of November-December 3s. 6½d., there are buyers of January-February at the price. - - - *Entrefine*—A good demand for Upriver, with little offering; no sellers under 3s. 5d.; Islands sellers at 3s. 3½d. *Negroheads*—Supplies of Scrappy are small, with buyers at 2s. 8d., sellers 2s. 8½d. *Cametá* in fair request at current rates. *Maniçoba* in steady request, but supplies are plentiful; closing quotations 2s. 3½d. *Peruvian*—Demand good and prices remain very steady. Buyers of Ball 2s. 5½d.; sellers 2s. 6d. Slab steady at 2s. 1d. Supplies for the next few months will be small."

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

October 29.—By the steamer *Fluminense*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
A. T. Morse & Co.	123,200	24,300	77,200	5,700=	230,400
New York Commercial Co.	116,500	36,300	42,400	5,500=	200,700
Reimers & Co.	74,400	36,400	49,300	.....=	160,100
Crude Rubber Co.	61,500	19,400	7,000	900=	88,800
Boston Rubber Shoe Co.	.....	.....	.....	7,500=	7,500

Total..... 375,600 116,400 175,900 19,600= 687,500

November 11.—By the steamer *Gregory*, from Manáos and Pará:

A. T. Morse & Co.	95,700	25,200	73,200	600=	194,700
New York Commercial Co.	88,200	21,500	39,100	.....=	148,800
Reimers & Co.	48,500	16,500	43,700	300=	109,000
Crude Rubber Co.	63,500	12,600	8,300	.....=	84,400
Boston Rubber Shoe Co.	18,700	1,900	25,300	.....=	45,000

Total..... 314,600 77,700 189,600 900= 582,800

November 22.—By the steamer *Maranhense*, from Manáos and Pará:

A. T. Morse & Co.	180,000	48,000	125,100	11,300=	364,400
Crude Rubber Co.	200,800	23,100	48,300	4,500=	276,700
New York Commercial Co.	123,400	31,900	63,300	800=	219,400
Reimers & Co.	128,900	39,700	31,900	2,500=	203,000
Boston Rubber Shoe Co.	37,400	2,200	29,700	9,300=	78,600
Joseph Banigan Rubber Co.	.....	.....	.....	7,500=	7,500
L. Hagenaars & Co.	3,600	.....	1,100	.....=	4,700
New York and Java Trading Co.	4,100	.....	500	.....=	4,600

Total..... 678,200 144,900 299,900 35,900= 1,158,900

[Note.—The steamer *Grangene*, from Pará, with 560 tons of rubber aboard, arrived at New York on November 27.]

CENTRALS—Continued.

OCT. 25.—By the *Pennsylvania*=Hamburg:
Reimers & Co..... 21,600
Livesey & Co..... 1,000
George A. Alden & Co..... 4,000 26,600

OCT. 26.—By the *Esperanza*=Mexico:
Graham, Hinckley & Co..... 6,500
Thebaud Brothers..... 1,700 8,200

OCT. 29.—By the *Allianca*=Colón:

G. Amsinck & Co..... 14,600
Hirzel, Feltman & Co..... 8,500

A. Santos & Co..... 7,000
Flint, Eddy & Co..... 4,500

Crude Rubber Co..... 3,400
Holdan & Van Sickle..... 2,200

Gillespie Bros. & Co..... 2,500
Kunhardt & Co..... 2,200

Samper & Co..... 1,500
Dumarest & Co..... 1,200

Lawrence Johnson & Co..... 1,000
A. P. Strout..... 400

T. N. Morgan..... 200
Lanman & Kemp..... 100 49,300

Nov. 1.—By Pennsylvania RR.=New Orleans:
G. Amsinck & Co..... 4,000
R. G. Bartholdi..... 700

Jimenez & Escobar..... 300 5,000

Nov. 2.—By the *Bellaura*=Pernambuco:
J. H. Rossbach & Bros..... 800
Herbst Brothers..... 1,900 2,700

Nov. 4.—By the *Seneea*=Mexico:
H. Marquardt & Co..... 1,500
Graham, Hinckley & Co..... 1,000

P. Harmony's Nephews Co..... 1,000

CENTRALS—Continued.

L. N. Chemedlin..... 500
Flint, Eddy & Co..... 500
E. Steiger & Co..... 200 4,700

Nov. 4.—By the *Capae*=Mollendo:
New York Commercial Co..... 17,500

Nov. 6.—By the *Finance*=Colon:

A. Santos & Co..... 8,400
Frame, Alston & Co..... 6,800

Isaac Brandon & Bros..... 4,800
Hirzel, Feltman & Co..... 2,700

Dumarest & Co..... 1,200
W. R. Grace & Co..... 600

G. Amsinck & Co..... 300 24,800

Nov. 6.—By the *Athena*=Greytown:

A. P. Strout..... 5,000
A. D. Straus & Co..... 1,500

G. Amsinck & Co..... 1,500
Kunhardt & Co..... 1,200 9,200

Nov. 8.—By the *El Valle*=New Orleans:
A. T. Morse & Co..... 2,500
For Europe..... 2,500

Eggers & Heinlein..... 300 6,300

Nov. 11.—By the *Phanicia*=Hamburg:
Reimers & Co..... 2,000
J. A. Pauli & Co..... 1,000 3,000

Nov. 11.—By the *Proteus*=New Orleans:
A. T. Morse & Co..... 6,300
A. N. Rotholz..... 1,500 7,800

Nov. 13.—By the *Orizaba*=Colon:

Hirzel, Feltman & Co..... 20,700
Holdan & Van Sickle..... 1,700

